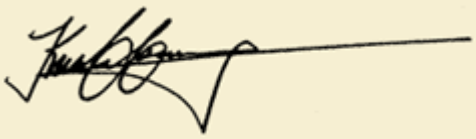
Foreword

Two significant events in 2004, one external, the other internal, put a new focus on the work of the Environmental Protection Department (EPD) and will have positive effects for years to come. First, we were able to establish regular exchanges and co-operation with the State Environmental Protection Administration on environmental protection issues. This was in addition to the on-going co-operation at the provincial level with Guangdong, which has enabled us to tackle in partnership with the Guangdong Environmental Protection Bureau such cross-boundary issues as water pollution in Deep Bay and regional air pollution. Second, we worked towards the merger of the EPD with the Environment Branch of the Environment, Transport and Works Bureau on 1 April 2005. By bringing the policy-formulation and implementation functions under one roof, the re-constituted EPD reports to the Secretary for the Environment, Transport and Works direct. This arrangement greatly shortens the line of command and improves the overall efficiency, which places us in a much stronger position to rise to the challenges to our environment.

To internalize the cost of pollution to society, we are keen to promote the "polluter-pays" principle. We made significant progress in this area in 2004 by enacting the Waste Disposal (Amendment) Ordinance 2004 which introduced a charging scheme to the disposal of construction waste. We carried out a major public consultation exercise on the second stage of the Harbour Area Treatment Scheme, and obtained a clear direction from the community to take the scheme forward. We embarked on a public engagement process on how to tackle the growing problem of municipal solid waste, and set in train a pilot scheme on the sorting of household waste at source. As a rule, we make it a point to consult all interested parties at the earliest possible stages of policy development and project inception, including legislators, environmental groups, professional bodies, industry, business, community groups, academics and, of course, the general public.

We recognize many of our environmental programmes have economic and social impacts, and are prepared to address these important issues from a sustainability perspective. We have taken note of the Global Reporting Initiative and have incorporated its principles in this report where possible. At the same time, we are determined to maintain our core business and ultimate objective of protecting the environment.



K K Kwok, JP
Permanent Secretary for the Environment, Transport and Works (Environment)/
Director of Environmental Protection

Readers are invited to comment on the EPD's performance and this report and suggest areas of improvement, through the feedback form at the end of this report or by e-mail to <enquiry@epd.gov.hk>.

1 Environmental Policy

Vision

Our vision is of a Hong Kong which enjoys an environment that is both healthy and pleasant, in which the community places a premium on sustaining such an environment for both themselves and future generations.

To realise this vision, we will continue to strengthen our ability to meet environmental sustainability goals. We will formulate and implement programmes to improve and safeguard the environment while contributing proactively to strategic decision-making in the government that will have an impact on the environment. We are committed to ensuring that all services and programmes offered by the Environmental Protection Department (EPD), as well as our own internal operations, are developed and conducted in an environmentally responsible manner.

In pursuance of these goals, the EPD has adopted the following principles:

Compliance

We aim to establish an effective legislative and an efficient control framework to safeguard the health and welfare of the community from any adverse environmental effects.

We will seek to provide moral leadership by not only complying with the letter of the law, but the spirit of all applicable environmental legislation, standards and regulations, as well as our internal guidelines and procedures, in all our operations within the EPD. We will endeavour to surpass them whenever possible.

Pollution Prevention

We aim to pre-empt environmental problems associated with development projects, plans and policies by applying environmental impact assessment in the planning process and seeking opportunities to improve the environmental quality of Hong Kong.

We will implement ISO14001 environmental management systems to improve continually the environmental performance of our major facilities. We will avoid, reduce and control environmental pollution arising from our day-to-day working practices. We will require our contractors to adopt and implement sound environmental management systems and pollution control measures, and actively encourage businesses and other organisations in Hong Kong to adopt similar systems and measures.

Response to Environmental Incidents

We will implement an emergency response system for handling environmental incidents, and will work closely with other government departments in responding quickly to minimise the damage to the environment.

Minimisation of Consumption

We aim to plan and provide convenient and cost-effective waste management facilities, as well as promote a sustainable approach to waste management in Hong Kong, in which we consume less, produce less waste, and reuse or recover value from waste.

We will exercise the principles of Reduce, Reuse and Recycle in the consumption of materials and seek continual improvement in the efficient use of natural resources and energy in all our operations.

Sustainable Development

We will actively contribute to government-wide policies and programmes that support sound environmental management and sustainable development. We will use and promote evolving scientific and technological systems, work with others and continue to build new partnerships in the

pursuance of sustainable development objectives.

Communication

We aim to promote community awareness, through environmental campaigns, publicity, education and action programmes, and public access to environmental information, with a view to harnessing the community's support for, and contribution to, achieving the desired environmental goals.

We will also publicise to the community our Environmental Policy and report annually on our environmental performance. We will ensure that all our staff are aware of our Environmental Policy, that they will be able to provide detailed information about our Policy and initiatives to stakeholders in their particular areas of concern.

Training

We will ensure through appropriate training and professional development, that every member of our staff has the knowledge and competency to assume his/her environmental responsibilities and to participate constructively in environmental activities.

Management Review

The Management will review this policy and the department's environmental objectives and targets vis-a-vis the changing internal and external factors, and seek continual improvement in our environmental performance.

2 Organisation, Programmes and Responsibilities

Our Vision

Our Vision is of a Hong Kong which enjoys an environment that is both healthy and pleasant, in which the community places a premium on sustaining such an environment for both themselves and future generations.

Our Mission

Our Mission is to make our contribution towards realising this vision by applying our professional knowledge and judgement and drawing on our experience in environmental protection and conservation

- *to formulate policies and plans on environmental protection and conservation;*
- *to increase community awareness of environmental protection and conservation issues;*
- *to implement environmental protection legislation and plans; and*
- *to participate in the town planning process*

with a view to achieving and maintaining a high standard of environmental quality and conservation.

Management

The Environment, Transport and Works Bureau has overall policy responsibility for the environment. The Environmental Protection Department (EPD) implements environmental plans and legislation, as well as advises on policy and new initiatives. Plans were underway in 2004 for a merger between the environment arm of the bureau and the EPD.

The department had an establishment of about 1 617 staff in 2004. Some 28 per cent were professionals, 45 per cent were technical-grade staff and the remaining 27 per cent were administrative and support staff.

Finances

In 2004, the total departmental expenditure was $2.179 billion. Of that amount, 51.7% was for contract payments for the treatment and disposal of municipal and chemical wastes, 34.1% was staff costs, 8.2% was capital expenditure and 6% was general expenses.

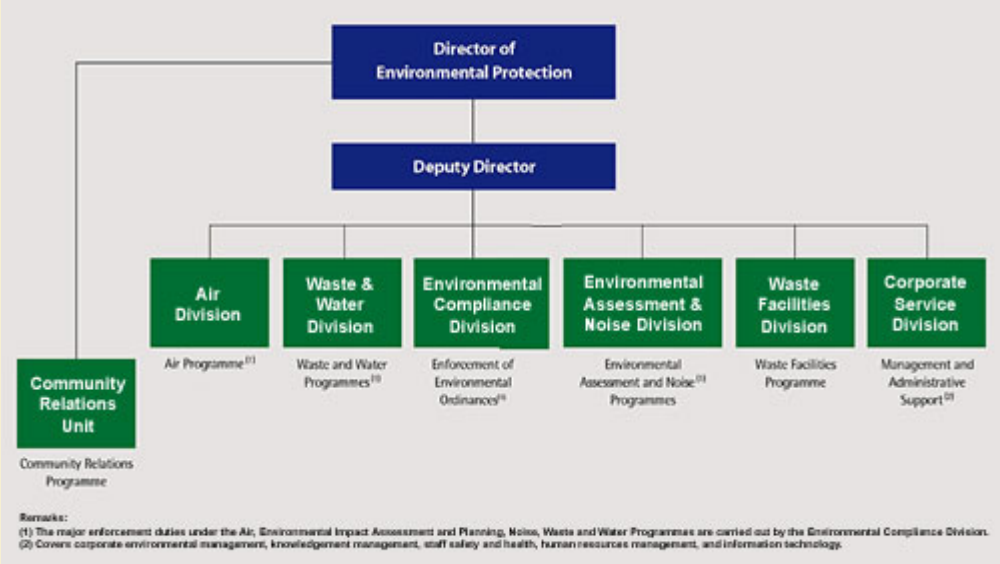
Responsibilities

The EPD was established on 1 April 1986, with staff and resources from six Government departments and the aim of bringing the majority of pollution prevention and control activities under one organisation. Responsibilities are distributed across six divisions and 1 unit (see Organisation Chart of the Environmental Protection Department below) covering seven programme areas (see Programmes below). These responsibilities include:

- implementing environmental policy and plans;
- promoting community environmental awareness;
- enforcing environmental legislation;

- monitoring environmental quality;
- providing collection, transfer, treatment and disposal facilities for many types of waste;
- advising on the environmental implications of town planning and new policies; and
- handling pollution complaints and incidents.

Organisation Chart of the Environmental Protection Department



Other government departments are also responsible for environmental initiatives related to their areas of responsibility. For example, the Electrical and Mechanical Services Department is responsible for energy efficiency, while the Agriculture, Fisheries and Conservation Department is responsible for nature conservation.

Programmes

The EPD has seven programme areas. Our aims and objectives under these are as follows:

Air Programme

- Achieve and maintain satisfactory air quality through intervention in the planning process.
- Participate in the risk management of potentially hazardous installations and in matters related to energy and global warming.
- Enforce the Air Pollution Control and Ozone Layer Protection Ordinances.
- Enforce the Road Traffic Ordinance against smoky vehicles.

Community Relations Programme

- Promote community awareness through environmental campaigns, publicity, education and action programmes.

Environmental Assessment and Planning Programme

- Pre-empt environmental problems associated with projects, plans, policies and strategies by assessing their environmental impacts and implementing preventive and mitigatory measures where potential problems are identified.
- Strive for the best possible environmental performance in both the public and private sectors.
- Enforce the Environmental Impact Assessment Ordinance.

Noise Programme

- Prevent, minimise and resolve noise problems through intervention in the planning process, implementation of noise abatement measures and enforcement of the Noise Control Ordinance.

Waste Programme

- Establish a framework of legislative and institutional controls to safeguard the health and welfare of the community from the adverse environmental effects associated with the improper handling and disposal of waste.
- Enforce the Waste Disposal and Dumping at Sea Ordinances.

Waste Facilities Programme

- Develop plans and programmes for the minimisation of waste.
- Provide facilities for managing any residual waste in a cost-effective and environmentally acceptable manner.
- Co-ordinate and manage the implementation of plans and programmes relating to waste minimisation and waste facilities.

Water Programme

- Develop plans and programmes to ensure the quality of inland and marine waters meets with our conservation goals.
- Formulate plans for sewerage, sewage treatment and disposal facilities and monitor their implementation to meet development needs and environmental standards.
- Enforce the Water Pollution Control Ordinance.

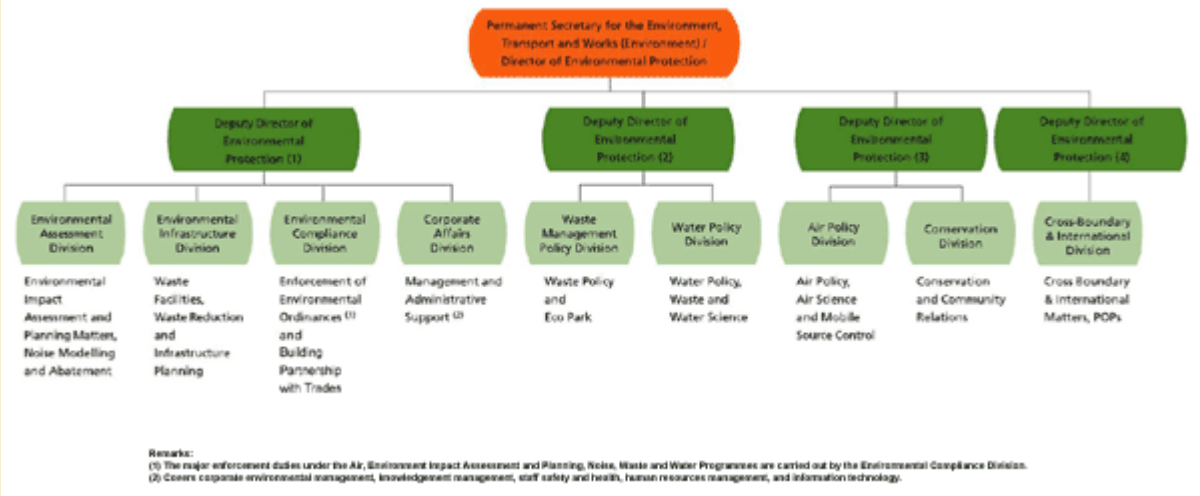
Changes Ahead for EPD - Re-organisation

The Environmental Protection Department will merge with the environment branch of the Environment, Transport and Works Bureau from 1 April 2005, a move that should help to make us more efficient and focused. The Director of Environmental Protection will report directly to the Principal Official, the Secretary for Environment, Transport and Works, and, for the first time, will be responsible for policy-making. This arrangement will better align our priorities with the policy agenda set by the Secretary and help raise the profile of environmental issues.

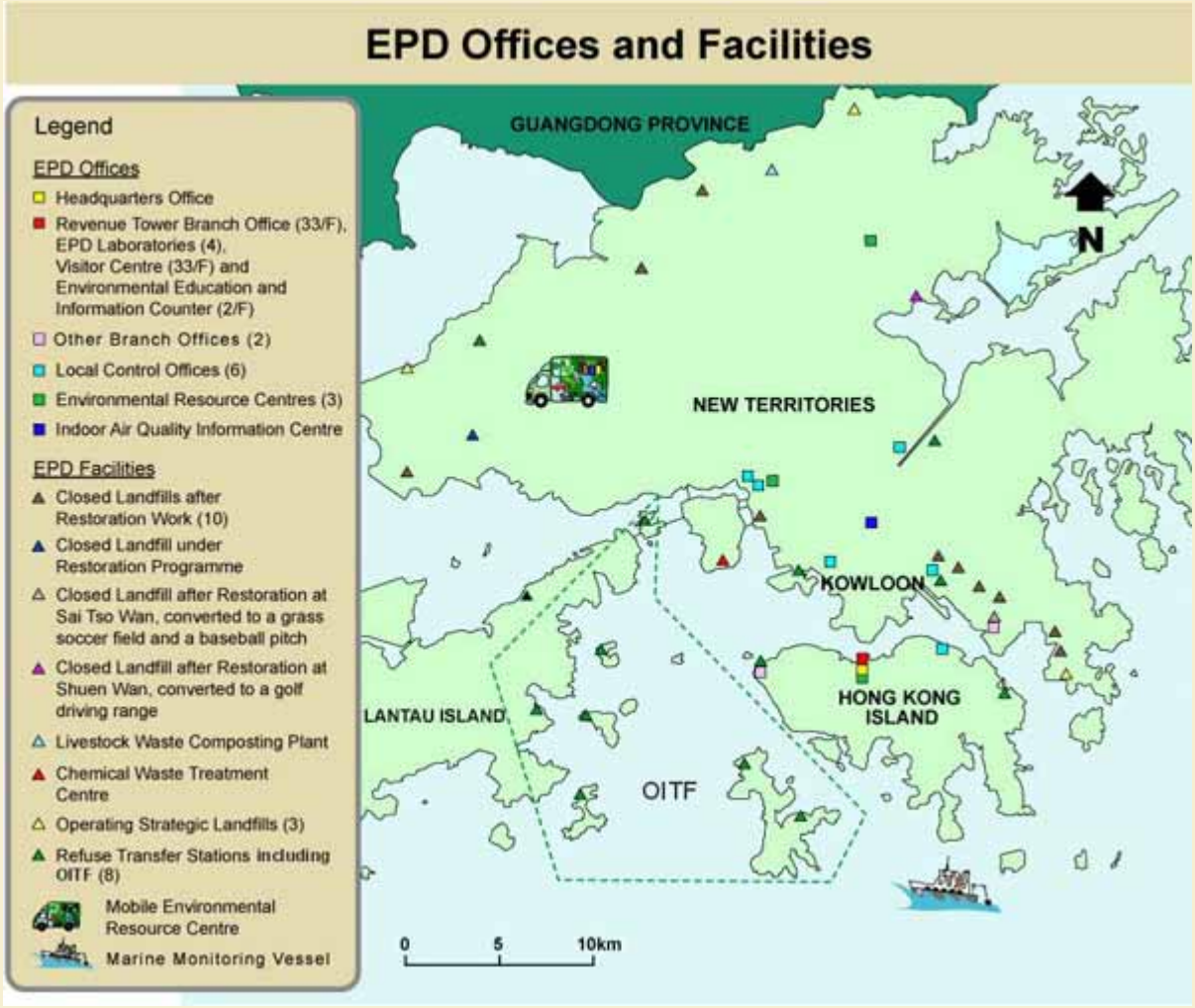
In preparation for the change, the EPD began re-structuring internally in 2004. The Local Control Division was renamed Environmental Compliance Division, to reflect its work in fostering partnerships with industry. The six Local Control Offices from which local enforcement work was carried out were restructured into four Regional Offices. The division also took over responsibility for territorial control, enforcing legislation on such issues as environmental impact assessments, asbestos, ozone-depleting substances and dumping at sea.

Other important changes include the establishment of a new division to focus on liaison with the Mainland on cross-boundary issues, and separate divisions to deal with waste and water policy matters.

Organisation Chart of the Environmental Protection Department as of 1 April 2005



3 EPD Offices and Facilities



Note: For information on EPD offices and facilities after 1 April 2005, please visit EPD homepage at http://www.epd.gov.hk/epd/english/about_epd/facility/facility.html.

Chemical Waste Treatment Centre, Tsing Yi.

North West New Territories Refuse Transfer Station.

Sha Ling Livestock Waste Composting Plant.

Sai Tso Wan Recreation Ground. (Restored Sai Tso Wan Landfill)

South East New Territories Landfill.

West New Territories Landfill.

Customer Service Centre at 10/F Shatin Government Offices.

Regional Office (South).

Headquarter Reception Counter at 46/F Revenue Tower.

EIAO Registration Office at 27/F Southorn Centre.

Roadside Air Monitoring Station at Central.

Fanling Environmental Resource Centre .

Marine Monitoring Vessel.

The Mobile Environmental Resource Centre.

4 Our Influence and Impact on the Environment

The Department's contribution towards improving the environment

Main Activities	Environmental Results
Contribute to the formulation of major policies and plans within the Government.	• Environmental impact of policies, strategies and planning proposals minimised.
	• Sustainability incorporated in decision-making process.
Develop and implement environmental improvement programmes.	Direct improvements in: • Air quality • Noise mitigation • Water quality • Waste management.
Plan and provide waste management facilities.	• Waste handled and disposed of in an environmentally responsible manner.
Establish regulatory control framework and enforce environmental ordinances.	• Air, water, waste and noise impacts from polluting activities reduced.
Build partnerships and engage stakeholders.	• Better co-operation gained from all sectors in improving the environment.
Deliver environmental education programmes to promote environmental awareness and public participation.	• Increased awareness about preventing and tackling environmental problems through enhanced partnerships and capacity building with stakeholders.
Support research and professionalism in the environmental disciplines.	• Professional contribution to environmental management in Hong Kong enhanced.

Environmental impacts of our operations

Operations and Services	Effects and Environmental Impact		Measures Taken to Contain the Impact
Waste Collection, Transfer and Disposal Services	Discharge of wastewater and leachate	• Pollution of receiving water bodies	Waste management facilities are equipped with wastewaster treatment systems to ensure discharge complies with water quality standards.
	Emission of landfill gas	• Potential fire and other hazards to human life	Operating and closed landfills are equipped with landfill gas management and monitoring systems to remove potential hazards and risks within and to the adjacent areas. Initiatives are also taken to make use of the collected landfill gas both on-site and off-site.
	Environmental nuisance	• Noise, odour and visual impact	Noise and odour nuisances are regularly monitored to ensure compliance with internal and statutory standards. Visual impact is assessed during the development stage of facilities. Mitigation measures such as landscaping and visual barriers are provided where appropriate.

	Exhaust emission from on-site treatment facilities, vehicles and vessel fleets	• Air pollution and contribution to greenhouse gas emissions	Exhaust emissions from facilities are regularly monitored. A network of transfer facilities is used to reduce round-trips of vehicles. Bulk marine transfer, which can help reduce traffic emissions, is adopted where appropriate.
	Consumption of fuel and electricity	• Air pollution and contribution to greenhouse gas emissions	At closed and operating landfills, landfill gas is utilised to substitute fossil fuel for electricity/heat generation.
Laboratory Services	Exhaust emission from fume cupboards and safety cabinets	• Air pollution impact	Emissions are scrubbed or filtered before release to the atmosphere. Regular monitoring for compliance with required standards.
	Wastewater discharge	• Pollution of receiving water bodies	Provision of buffer tanks to prevent accidental discharge of unsuitable substances into the sewers. Regular monitoring of discharges from sinks for compliance with required standards.
	Accidental chemical spillage	• Potential hazards to human life	Staff are trained to deal with accidental spills. All laboratories are provided with emergency spill kits and procedures for handling chemical spillage/leakage.
	Generation of chemical and biological wastes	• Residual pollution from waste treatment processes	Chemical waste is properly treated and disposed of by the Chemical Waste Treatment Centre, and biological waste is disinfected and disposed of in accordance with WHO guidelines.
Field Work	Fuel consumption and emissions from vehicles/vessels	• Air pollution and contribution to greenhouse gas emissions	Vehicles that run on petrol or LPG are used and follow a non-idling policy. Groups and offices combine trips whenever possible.
	Use of chemicals	• Contamination of soil and water bodies	Only non-toxic dye is used to trace pollution sources.
	Disposal of samples	• Residual pollution from waste treatment processes	Used samples are returned to laboratories for proper disposal.
Office Activities	Consumption of energy and resources (electricity, paper, water, stationery, etc.)	• Air pollution and contribution to greenhouse gas emissions • Depletion of resources	• Reduce the number of departmental vehicles and adopt cleaner fuels. • Reduce paper consumption on average 2.5% per year for the next 3 years. • Encourage wider IT applications in terms of documents sharing and electronic submission & approval for purchase. • Endeavour to reduce electricity consumption through energy saving measures and lighting audits to identify improvement opportunities in EPD offices.

5 Our Contribution to the Environment

5.1 Our Contribution to Strategic Decision-Making

Our Responsibilities

We will contribute actively to government-wide policies and programmes that support sound environmental management and sustainable development, and we will advise the government on the environmental impacts of strategic development proposals.

Achievements in 2004

Input on Major Policies and Strategies

Strategic Environmental Assessments (SEAs): The EPD manages the SEAs of major policies and strategies. In 2004, work focused on the SEA for Hong Kong 2030 (HK2030), a major study on the future development of Hong Kong. The EPD chairs the environmental study management group, which also includes members of academia, green groups, and professional bodies. All interim SEA reports and working papers on HK2030 have been posted on the HK2030 website. Three rounds of formal public consultations have been carried out and a fourth and final round will be held in 2005. Separately, an SEA on the territory-wide implementation study for water-cooled air conditioning systems in Hong Kong was completed and will be uploaded on the EPD website in 2005.

SEA Manual: The Hong Kong Strategic Environmental Assessment Manual was finalised in 2004, and has been posted on the EPD website. It is a useful reference for government officials, decision makers and local and international professionals involved in the formulation of policies, plans and programs which might have significant environmental implications.

Environmental Paragraphs: The EPD reviews and comments on the environmental implications sections contained in submissions to the Policy Committee, the Executive Council, the Legislative Council's Public Works Sub-committee and Environmental Affairs Panel, and other official bodies. In 2004, more than 130 environmental implications sections were reviewed.

Sustainable Development Unit: The EPD contributes environmental information to the Government's Sustainable Development Unit, which was set up in 2001.

Regional Co-operation

Liaison with SEPA: The EPD has secured approval to deal directly with the State Environmental Protection Administration (SEPA) on EIA related matters, rather than going through the Hong Kong and Macau Affairs Office. The first formal exchange was held in 2004. Three EPD staff spent one month at SEPA's head office in Beijing in the autumn, and SEPA staff will visit Hong Kong on exchange in 2005. In addition, the Assistant Director (Environmental Assessment and Noise) contributed to two major training sessions on the Mainland to train about 300 professionals and officials as trainers.

EPD colleagues participate in the staff exchange programme with SEPA in Beijing in October.

Mr Elvis Au, Assistant Director of EPD, conducts a training course on strategic environmental assessment at Shanghai in October.

1st China International Forum on EIAs: The Environment, Transport and Works Bureau and the EPD were co-organisers of the first China International Forum on Environmental Impact Assessment, along with SEPA, Hainan Province's Land, Environment and Resources Bureau, the Chinese Society for Environmental Scientists and the International Association of Impact Assessment. The event was held in BoAo on Hainan Island in December 2004 and sponsored by SEPA. Hong Kong's Secretary for the Environment, Transport and Works, Dr Sarah Liao, was one of the keynote speakers of the forum.

Dr Sarah Liao, Secretary for the Environment, Transport and Works, is one of the keynote speakers at China's first International EIA Forum held in BoAo, Hainan in December.

Hong Kong-Guangdong Joint Working Group on Sustainable Development: The Joint Working Group, set up in 1999, continued to address cross-boundary issues. Work proceeded on a regional air quality plan and on managing cross-border EIAs, in particular the Tonggu Channel of Shenzhen Port and the Hong Kong-Zhuhai-Macau bridge. Both sides were also preparing for a review of the Deep Bay Water Quality Improvement programme.

Improving Government's Performance

The EPD supports measures to improve the Government's environmental performance. In 2000 all departments and bureaux had to start producing annual environmental performance reports. Commencing 2003, the EPD has provided training and a benchmarking tool on environmental performance report. In 2004 it also launched a Cyber Helpdesk on its website to provide further support.

The EPD is also following the Environment, Transport and Works Bureau's directive in 2004 to set the thermostat at all government offices at 25.5 degrees Celsius.

5 Our Contribution to the Environment

5.2 Planning for a Better Environment

5.2a Prevention and Mitigation through Environmental Impact Assessment

Our Responsibilities

We aim to pre-empt environmental problems associated with projects, plans and policies by assessing their environmental implications and implementing preventive and mitigatory measures where potential problems are identified.

Protecting the Community and the Environment

Since the enactment of the Environmental Impact Assessment Ordinance (EIAO) in April 1998, we have protected:

- 2.6 million people from the possible adverse impacts of projects through impact avoidance and control measures;
- 1 130 ha of biological area through the environmental impact assessment process.

Achievements in 2004

EIAs

The EIAO helps to avoid and mitigate against undesirable impacts from projects before they are built. Up to 2004, projects worth a combined $324.4 billion had met EIAO requirements and were approved, including the West Rail, the Disney Theme Park on Lantau and other strategic road projects. The EPD also managed 130 environmental monitoring and audit programmes during the year.

The Hong Kong Disneyland site under construction on Lantau Island.

The EPD has been liaising with Mainland authorities to manage cross-boundary project EIAs. The EIAs of the Tonggu Channel of the Shenzhen Port and the Hong Kong-Zhuhai-Macau Bridge are underway. Work has begun on one approved project, the Shenzhen Western Corridor, and is being monitored, and work will commence on the Towngas submarine pipeline in early 2005.

Public Involvement

The government is keen to promote continuous public involvement (CPI) in the EIA process. Public input on projects during public exhibition of project profiles and EIA reports has been welcome for some time. New technology is enabling input at other stages of the process. A 3-D EIA public engagement tool, that helps people visualise a proposed project and its impacts, was developed in 2004. Two mock 3-D projects were uploaded onto the EPD website to demonstrate the tool to the public, and two information seminars were organised for professionals, academics, consultants, community groups and others. The first project to incorporate the 3-D tool was the EPD's Northeast New Territories Landfill Extension, which included it in its EIA study brief.

The EPD also piloted the use of an electronic whiteboard at a workshop on the Kwai Tsing District Revitalisation Project. Members of the public, community leaders and others recorded their comments and suggestions on a 3D image displayed on the whiteboards, which was then stored in computers for consideration by the design team.

Members of the public record their comments at a meeting using an electronic whiteboard.

Links with Stakeholders

EIAO Support: The EIAO Support Section provides assistance on the EIA process to other government departments and the private sector. In 2004 it launched an e-learning platform on the EIA mechanism and held 13 workshops on the EIA process for 430 participants. The section also operates a helpdesk and produced a Training Manual on the EIA Mechanism in 2003.

Help for SMEs: Targeted support was offered in 2004 to SMEs, which make up the main bulk of industry in Hong Kong and the Mainland but have little or no knowledge of environmental management systems or ISO 14001 certification. The EPD prepared a support package for SMEs in the construction industry and launched it at a seminar in December that attracted more than 200 participants. Feedback was very positive, with 87% of respondants rating the seminar "useful" or "very useful" and 98% saying it helped them understand the environmental trends facing the trade. Supporting materials were placed on the EPD website and published in a CD-ROM. A tailored package is also being prepared for the electrical/electronic sector, to be launched at a January 2005 seminar.

The support package in CD-ROM format.

EPD organised a seminar in December to launch an Environmental Management Information and ISO 14001 EMS support package for the construction sector, with speakers from the industry and government departments.

User Liaison Groups: The EPD has set up four User Liaison Groups, with government works departments, consultants, contractors, private developers and public corporations. A joint seminar on Continuous Public Involvement was held in May 2004, with more than 250 participants from different sectors.

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5 Our Contribution to the Environment

5.2 Planning for a Better Environment

5.2b Better Air Quality

Our Responsibilities

To achieve and maintain satisfactory air quality through intervention in the planning process and enforcement of the Air Pollution Control Ordinance, Ozone Layer Protection Ordinance and other statutory requirements.

Air Quality in 2004

The EPD operates 14 air quality monitoring stations to monitor compliance with Air Quality Objectives (AQOs). See map at Figure 1.

Air quality deteriorated in 2004 due to a combination of increasing regional pollution and unfavourable weather conditions. Annual AQOs were exceeded at most stations due to high particulate levels. Table 1 sets out the compliance status of long-term (Annual) Air Quality Objectives for various monitoring stations in 2004.

Non-compliance with short-term AQOs can best be represented by the frequency at which the Air Pollution Index exceeds 100. In 2004, the Air Pollution Index exceeded 100 on 87 days.

Figure 1 - Location of EPD's Air Quality Monitoring Stations.

Table 1 - Compliance Status of Long-term (1-year and 3-month average) Air Quality Objectives (AQO) in 2004

Station		Sulphur Dioxide 1-year	Nitrogen Dioxide 1-year	Total Suspended Particulates 1-year	Respirable Suspended Particulates 1-year	Lead 3-month
General Station	Central/Western	•	•	•	x	•
	Eastern	•	•	--	•	--
	Kwai Chung	•	•	x	x	--
	Kwun Tong	•	•	x	x	•
	Sham Shui Po	•	•	x	x	--
	Tsuen Wan	•	•	x	x	•
	Sha Tin	•	•	•	x	--
	Tai Po	~	~	~	~	--
	Tung Chung	•	•	•	x	•
	Yuen Long	•	•	x	x	•
	Tap Mun	•	•	--	•	--
Roadside Station	Causeway Bay	•	x	--	x	--
	Central	•	x	--	x	--
	Mong Kok	•	x	x	x	•

Notes:
"•" Complied with the AQO
"x" Violated the AQO
"--" Not measured
"~" Data are below the minimum requirement for compliance assessment

Achievements in 2004

- Regional Air Quality
- Motor Vehicle Emissions
- Volatile Organic Compounds
- Other Air Issues

Regional Air Quality

The Hong Kong and Guangdong administrations are working together to address the growing problem of regional air pollution. Ambitious targets have been set to reduce levels of four major air pollutants and enable Hong Kong to largely comply with our Air Quality Objectives by 2010. The targets can be met if all areas of an agreed plan of action can be carried out. The plan involves reducing emissions from power plants, industry and motor vehicles. In 2004 the following was achieved:

1. A regional joint air quality monitoring network was in place, ready to start operating in mid-2005. 16 stations have been set up, including 3 in Hong Kong.
2. A manual on the agreed standards for compiling emissions inventories was completed.
3. Technical exchanges with Guangdong continued, thereby enhancing understanding and knowledge on both sides. The EPD was also closely involved in the setting up of the Guangdong Province Quality Assurance Laboratory to support the Guangdong Province air quality monitoring network.
4. Discussions were underway between Hong Kong, Guangdong and the Hong Kong power companies on a pilot emissions trading scheme.
5. The Hong Kong SAR Government undertook negotiations with the local power plants on reducing emissions and energy consumption.
6. Hong Kong continued with its programmes to reduce motor vehicle emissions and volatile organic compounds (see below).

Guangdong has also taken a number of steps to reduce emissions. It has adopted Euro II standards for new vehicles, reduced the sulphur content of motor diesel fuel from 0.5% to 0.2% or less, started

building subways and liquefied natural gas plants, and started installing flue gas desulphurisation systems to electricity generating units with a capacity of more than 125 megawatts.

Motor Vehicle Emissions

Significant success has been achieved in controlling motor vehicle emissions. New vehicles have to meet Euro III standards and we will update to Euro IV by 2006. Automotive fuels will meet Euro IV standards in 2005. For existing vehicles, a $1.4 billion package was announced in 1999 to address emissions. As a result of these measures, nitrogen oxides and particulate emissions from motor vehicles have decreased, as shown in Table 2.

Table 2 - Territory wide motor vehicle pollutant emissions

Year / Pollutants	Weight units in tonnes		Normalized Emission	
	PM	NOx	PM	NOx
1999	3 900	27 500	100%	100%
2000	3 590	27 800	92%	101%
2001	3 040	26 300	78%	96%
2002	2 800	25 500	72%	93%
2003	2 090	20 100	54%	73%

In 2004 progress was made in the following areas:

1. Retrofitting older diesels

About 34 000 pre-1995 diesel vehicles over four tonnes have been retrofitted with particulate removal devices. In addition, about 3 500 long-idling vehicles, which need a different type of catalyst, will be invited for retrofitting in 2005. The retrofitting programme should be completed by the end of 2005.

2. Replacing diesels

Nearly all of Hong Kong's taxis operate on liquefied petroleum gas (LPG). Nearly 80% of the newly registered public light buses were LPG models.

3. Reducing smoky vehicles

As a result of measures undertaken over the past five years, smoky vehicle reports have dropped by 77.6% compared with 1999, as seen in Table 3.

Table 3 - Smoky vehicle reports have dropped significantly since the $1.4 billion package to reduce motor vehicle emissions was introduced in 1999

Year	Smoky Vehicle Reports Received	Year	Smoky Vehicle Reports Received
88	16 418	96	44 665
89	25 147	97	40 536
90	29 032	98	46 802
91	32 919	99	58 960
92	68 974	00	64 118
93	66 705	01	29 236
94	67 551	02	18 533
95	51 635	03	15 392
		04	13 215

In addition, the EPD organised a Motor Vehicle Emissions Control Workshop 2004 in December to

promote exchanges of technology and experiences. Participants came from the Mainland, the United States and elsewhere in Asia.

Mr Roy Tang, Deputy Secretary for the Environment, Transport and Works, addresses the audience at the Motor Vehicle Emissions Control Workshop 2004 held in Hong Kong in December.

Volatile Organic Compounds

A mandatory registration and labelling scheme for volatile organic compounds went out for public consultation in 2004, with the aim of using market forces to control the problem. Also, a regulation to require petrol filling stations to install and operate vapour recovery systems for vehicle re-fuelling was gazetted in December 2004 and will be implemented by the end of 2005.

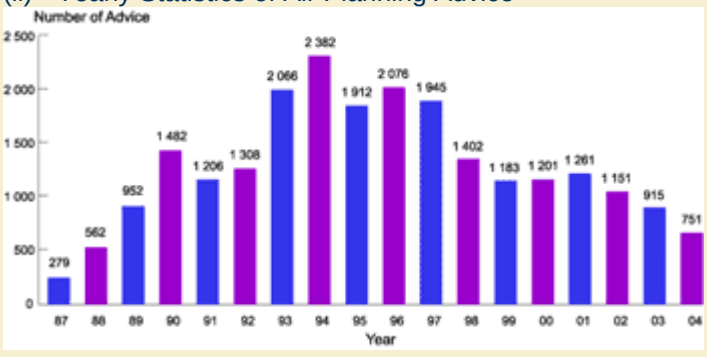
Other Air Issues

Advice: The EPD provides professional advice in the strategic, land use and transportation planning processes. In 2004 we provided 751 pieces of air planning advice; a breakdown can be seen in Figure 2 - Statistics of Air Planning Advice 2004.

Figure 2 – Statistics of Air Planning Advice

(i) – Statistics of Air Planning Advice in 2004 - Breakdown by types

(ii) - Yearly Statistics of Air Planning Advice



Regional ozone standard: In 2004 the department introduced a sophisticated standard reference photometer (SRP), obtained from the National Institute of Standards and Technology in the United States. It is being used as a regional calibration standard for ozone measurement. Environmental authorities in Macau, Beijing and Guangdong have also checked their ozone calibrators against our

SRP.

CFCs: A voluntary programme was launched to promote CFC-free treatment inhalers for asthma and chronic obstructive pulmonary disease. The programme has received widespread support from stakeholders, and the public health care sector is working progressively to adopt non-CFC replacements. Separately, a reduced quota for local consumption of HCFCs was successfully launched during the year.

Indoor air: A voluntary Indoor Air Quality Certification scheme that was introduced in September 2003 has seen six sites achieve "Excellent Class" and 46 sites "Good Class".

Government initiative: The Environment, Transport and Works Bureau required all Government offices to set their air-conditioning thermostats at 25.5 degrees Celsius.

5 Our Contribution to the Environment

5.2 Planning for a Better Environment

5.2c Quieter Environment

Our Responsibilities

We aim to prevent, minimise and resolve environmental noise problems through intervention in the planning process, implementation of noise abatement measures and enforcement of the Noise Control Ordinance.

Noise Exposure

Noise has an enormous social impact in Hong Kong. More than one million people are affected by excessive traffic noise alone. Thousands of others are affected by construction, rail, commercial and other noise sources. The EPD is working hard to minimise the impacts on these receivers.

Achievements in 2004

Traffic Noise

Traffic noise is addressed in two ways: by preventing noise from new roads through input in the planning process, and by reducing noise from existing roads.

New roads

- Since 1986, 45 kilometres of noise barriers and enclosures have been installed on new roads, protecting 173 000 people. Yearly cumulative length of screening structure and number of people benefited are shown in Figure 1.
- Since 1995, 7 400 flats have been insulated from noise through acoustic insulation and air-conditioning as seen in Figure 2.
- Low-noise surfaces are the standard for new roads with speeds of 70 kilometres per hour or higher.

Figure 1 - Screening Structure to Reduce Traffic Noise

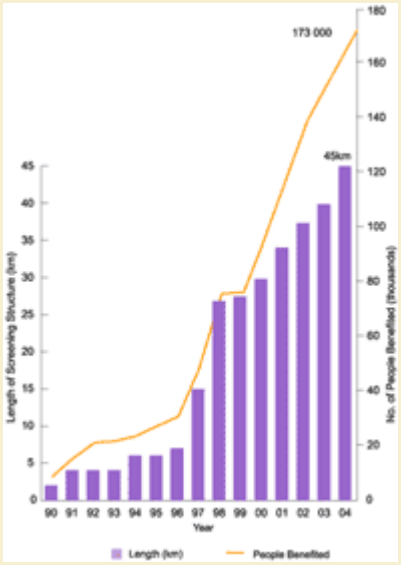
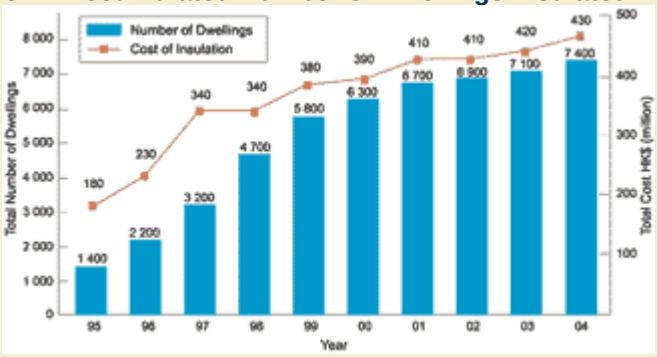


Figure 2 - Accumulated Number of Dwellings Insulated in 2004



Existing roads

- Construction of about three kilometres of barriers along Fanling Highway was commenced in 2004, to ease traffic noise for about 2 000 dwellings in Fanling and Sheung Shui. This is part of a retrofitting programme to erect barriers and enclosures on over 30 roads (see programme details at Table 1). The Fanling project will cost $139 million, be completed by the end of 2005 and reduce traffic noise by up to 17 dB(A).
- Seventy-two road sections are to be re-surfaced with a low-noise surface. Work on the first batch of 24 road sections began in 2002. In 2004, work began on the second batch of 22 road sections.

Table 1 - Retrofitting Noise Barriers - Tentative Implementation Programme

Construction Noise

An amendment to the Noise Control Ordinance came into effect on 8 October 2004, making corporate directors liable for repeated noise offences by their companies. This followed publication of two Codes of Practice describing good management practices for avoiding noise violations. Directors receive a warning letter after a first offence. If another offence occurs within two years, they can be prosecuted. Defendants

can use a due diligence defence if they have put an environmental management system in place and are operating it effectively. Information seminars on the matter were held in October and attended by more than 500 people.

A seminar addresses queries and misunderstandings about directors' liability under the Noise Control Ordinance.

Codes of Practice help company directors understand their liability regarding compliance with the Noise Control Ordinance.

Raising Awareness

3-D tool: The EPD aims to enhance people's understanding of noise and the impacts of proposed new projects and mitigation measures. A significant achievement in 2004 was the introduction of a three-dimensional visualisation tool. This easy-to-understand visual guide lets people see the noise impacts of proposed projects from different angles, and enables more informed public input during consultation. Two hypothetical examples were posted on the EPD website to demonstrate how the tool works.

This digital 3-D image visualises traffic noise levels in a city.

A road erected with noise barriers in 3-D display.

Education package: Greater understanding of environmental noise is also being promoted through an interactive education package. A website, with sections targeted at the general public and at young people, was launched in December 2003. The second part of the package, a CD-ROM, was distributed to schools, libraries and other users in 2004.

Noise study: A study on noise in Hong Kong, initiated in late 2003, proceeded in 2004 and will provide detailed information on the many sources of noise and the effects on receivers. It will be completed in 2005 and the results will be used to help formulate new policies and measures to control noise.

Staff exchange: A six-month staff exchange with the Highways Department was completed in 2004, enabling a better understanding of the priorities and constraints each department faces.

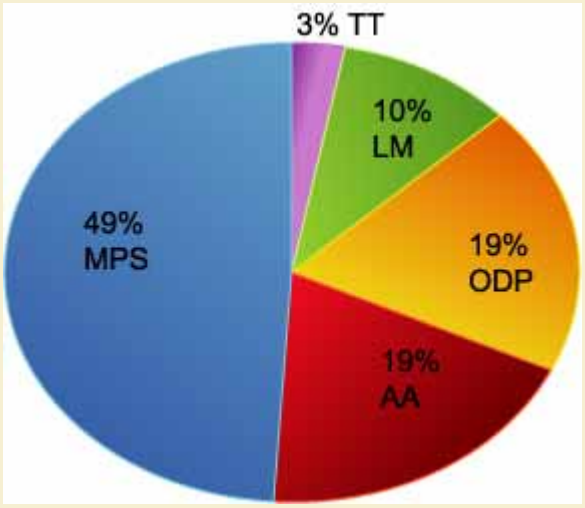
Active Participation in the Planning Process

Since 1986, over 140 000 flats have been protected from excess noise through EPD intervention in the planning process.

The EPD provides professional advice to minimise noise through land use and planning activities. In 2004 we provided input on 1 418 advice/cases. See breakdown at Figure 3.

Input is also provided on strategic-level noise improvement measures, as identified in the Third Comprehensive Transport Study published in 1999, and progress can be viewed at Table 2.

Figure 3 - Breakdown of 1 418 Noise Planning Advice/Cases in 2004



ODP Outline Development Plans, Outline Zoning Plans, Layout Plans, Planning Briefs, School Sites/Layouts/Abatement Measures, Residential Development/Schemes

LM Grants, Leases, Short Term Tenancies, Allocations, etc.

TT Transport and Traffic Projects Studies

MPS Major Planning Studies (Reclamations, Environmental Impact Assessments, Environmental Assessments, etc.)

AA Acoustic Advice to other Departments/Bodies

Table 2 - Report and Progress on Various Improvement Measures Identified in CTS-3

Type of Measures	Recommended Strategic Level Noise Improvement Measures	Current Progress
Policy	More extensive use of rail service	About 13 km of railways were put into operation in 2004. 11 km of railways are being constructed and others are being planned.
	Putting new roads underground as far as practicable	The Environmental Impact Assessment Ordinance requires exhausting direct mitigation measures which would include underground road alignment.
	Pedestrianisation	Several schemes implemented and additional schemes are being studied.
Engineering	More stringent vehicle noise emission standards	Regulation was amended in 2002 to follow latest European Union and Japanese requirements.
	Trolley buses	In light of the feasibility study findings, the merits of implementing a pilot trolley bus scheme in a southeast Kowloon development vis-a-vis other environmentally friendly transport modes will be examined.
Measures at Source	More extensive use of low noise road surfacing	72 local road sections will be resurfaced under the new policy endorsed in November 2000.
	Retrofitting existing roads with barriers or enclosures	Construction of Fanling Highway retrofitting projects commenced in August 2004. Design work for other retrofitted barriers in the first batch of projects is in progress.
Management Possibilities	Traffic management on noise ground	Trial of traffic management scheme at Texaco Road Flyover was carried out in mid-2004.

5 Our Contribution to the Environment

5.2 Planning for a Better Environment

5.2d Better Water Quality

Our Responsibilities

We aim to ensure that the quality of our marine and freshwater is such that the various conservation goals for them can be met, and that plans are formulated and implemented to ensure Hong Kong's sewage systems can operate safely and effectively both now and with future urban development.

Water Quality in 2004

Water quality is monitored in rivers, beaches and marine waters to measure compliance with Water Quality Objectives (WQOs) and protect the health of the public and the environment. Over the past 15 years, there has been much improvement in overall water quality, although some problem areas still need addressing, such as western Victoria Harbour.

Overall water quality has been much improved over the past 15 years.

In 2004:
- 87% of marine water samples met WQOs, similar to that in 2003.
- 82% of river and stream samples met WQOs, similar to that in 2003.
- 34 of 41 gazetted beaches (83%) met WQOs for bathing beaches, the same as that in 2003. A breakdown of results in 2004 can be seen at Table 1. The beach water guidelines are health-based.

Table 1 - Beach Water Quality in 2004

Beach rank	Number of beaches
Good	25 (61%)
Fair	9 (22%)
Poor	5 (12%)
Very Poor	2 (5%)

Achievements in 2004

- Harbour Area Treatment Scheme (HATS)
- Regional Issues
- Toxic Pollution
- Other Water Issues

Some 6.2 million Hong Kong people currently are served by public sewage treatment systems, as seen in Figure 1.

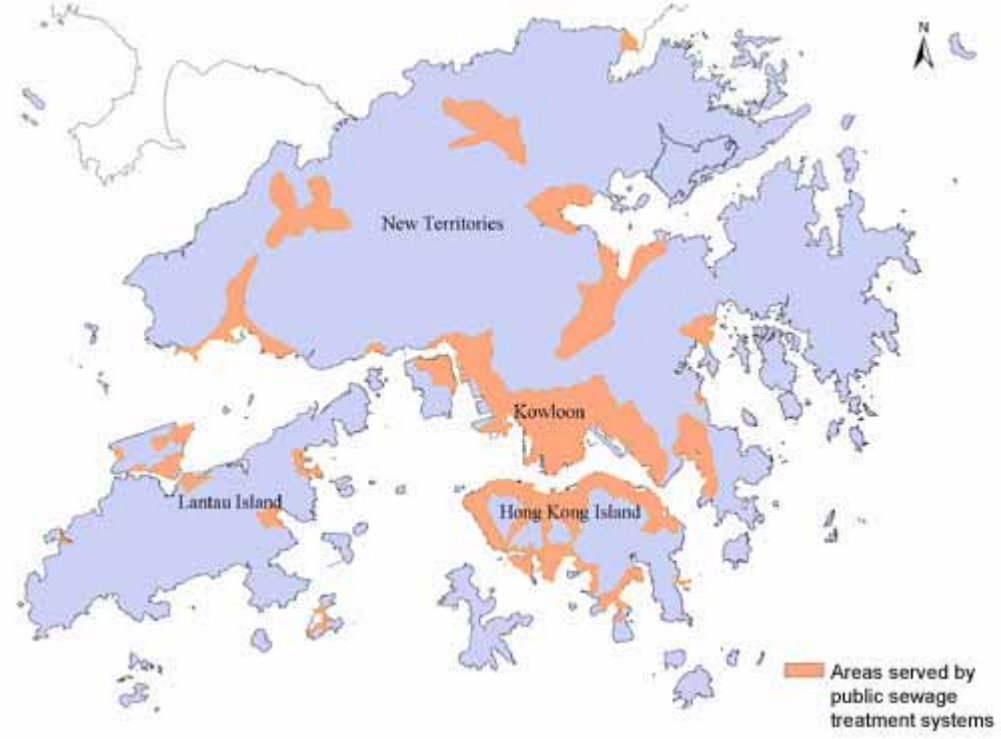


Figure 1 – Areas served by public sewage treatment systems.

Harbour Area Treatment Scheme (HATS)

Stage 1 of HATS began operating in 2001 and significantly improved the water quality in eastern and central Victoria Harbour. The next stage has been widely debated. An International Review Panel (IRP) of experts recommended several options in 2000 (see Figure 2).

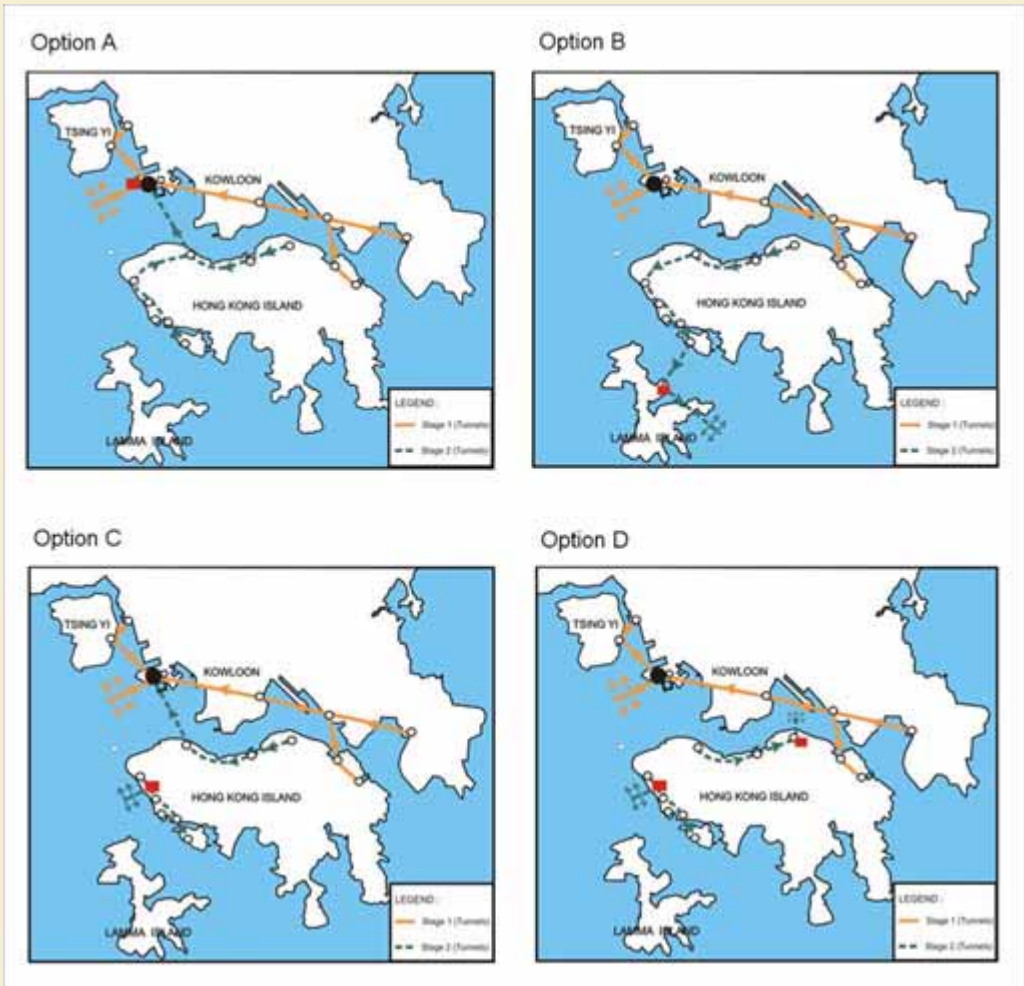


Figure 2 - Schematic map of HATS options.

Detailed studies of these options were completed in 2004 and the public was consulted on the government's proposal as follows, with option A as the prefered option:

1. Divide the second stage into two phases.
   In Stage 2A, the remaining 450 000 tonnes of untreated sewage from Hong Kong Island would be given chemically-enhanced treatment (CEPT) plus disinfection at the existing treatment plant on Stonecutters Island. Disinfection would also be applied to the Stage 1 sewage. In Stage 2B, a biological treatment plant would be built, with the commencement date dependent on trends in water quality in the harbour and future sewage loads. Cost is a consideration in this approach because it staggers the $19.5 billion outlay required for all of Stage 2 (see Figure 3 - Breakdown of Costs). In any case, sewage charges will have to increase.

Figure 3 – Breakdown of Costs.

	Capital Cost (HK$billion)	Recurrent Cost (HK$billion per year)
Stage 2A	8.4	0.44
Stage 2B	11.1	0.72
Total	**19.5**	**1.16**

2. Disinfect sewage in Stage 2A.
   The beaches at Tsuen Wan are strongly influenced by effluent from Stage 1 of HATS. Bacteria in the effluent will need to be adequately removed if these beaches are to be reopened. The government proposes to do this through chlorination after the CEPT process, but the treated effluent would need de-chlorination before being discharged. An EIA will assess the effects of this technique.

3. Build the biological treatment plant underground, next to Stonecutters Island.
   The IRP recommended biological aerated filter treatment because of its compactness. Studies found this technology could apply in Hong Kong.

4. Keep sewage treatment at one site.
   Some people in the community have suggested using two or more sites, but this was considered impracticable and costly.

5. Use conventional contractual arrangements.
   A design-build-operate contract could be suitable for treatment plants, as it would expedite the delivery of the project. But since the Drainage Services Department already operates the Stonecutters Island plant, any application of the DBO approach to Stage 2A would need more careful consideration of the interfaces involved. The approach may be considered for Stage 2B.

Consulting the public

A five-month public consultation on HATS ended on 20 November 2004. District Councils, green groups, academics, professional bodies, business and industry groups, and legislators were consulted, and an extensive community education programme was launched to encourage the public to express their views.

Most comments focused on the phasing proposal. Some concerns were expressed about chlorination, others about the timing of Stage 2B. The government will address chlorination in an EIA of the project, and will build Stage 2B based on water quality trends after 2A is commissioned. The government is now reviewing comments from the public and will report to the Legislative Council in the first half of 2005.

Regional Issues

The EPD is working with the Shenzhen Environmental Protection Bureau on a programme to review the Deep Bay Water Pollution Control Joint Implementation Programme, aiming to complete the review in 2006.

The EPD is liaising with the Guangdong Environmental Protection Bureau to develop a water quality model for the Pearl River estuary. Data has been collected and fieldwork completed, and the modelling contractor is now constructing the model. The model should be ready by early 2006.

Toxic Pollution

A programme to sample and test for toxic substances in the marine environment was begun mid-2004 and will be conducted once a year. At the same time, a biological indicator monitoring programme was begun to assess the effects of pollution on the ecological health of the marine environment.

China ratified the Stockholm Convention on the reduction of persistent organic pollutants in 2004 and this was extended to Hong Kong. Signatories are required to draft an implementation plan. Hong Kong is now drafting its plan, which will be included in China's National Implementation Plan for submission to the Stockholm Convention Secretariat by November 2006.

Trawling for marine biota to obtain tissue for toxic substances analysis.

The Stockholm Convention is a global commitment to rid the world of persistent organic pollutants.

Other Water Issues

Funding approval is being sought for a $14.5 million pilot effluent re-use scheme at Shek Wu Hui. A high-level treatment unit will be added to the existing secondary sewage treatment plant to produce high quality reclaimed water for flushing, irrigation and water features in the Sheung Shui area. The project is expected to begin operating in 2006 for a two-year trial.

An in-house study on storm water pollution was completed. The study focused on Mongkok and estimated that BOD loading equivalent to 12% of the sewage generated from the area ended up in storm water drains. The pollution came from sewage from defective sewers, expedient connections, and non-point source pollution such as street washing. The findings indicate the need for a comprehensive approach to control this problem.

Re-using treated effluent wherever possible forms an essential component of a holistic water management strategy.

5 Our Contribution to the Environment

5.2 Planning for a Better Environment

5.2e Environmentally Sound Waste Management and Facilities

Our Responsibilities

We aim to provide convenient and cost-effective waste management facilities, as well as promote a sustainable approach to waste management in Hong Kong, in which we consume less, produce less waste and re-use or recover value from waste.

Waste Disposal in Hong Kong

The quantities of waste disposed of at Hong Kong's landfills have remained steady over the years. In 2004:

- 3.4 million tonnes of municipal solid waste (MSW) required disposal, a figure that has been stable in recent years (see Table 1 - MSW). This compares favourably with a 3.5% annual growth rate in the years before 2000.
- Construction waste disposed of at landfills decreased by 2% over 2003 to 2.41 million tonnes. Construction waste has been a problem at landfills for years (see Table 1 - C&D Waste).
- Special wastes disposed of at landfills, such as asbestos and livestock waste and sludge from sewage and water treatment, increased by 2% to 0.59 million tonnes (see Table 1 - Special Waste).
- The Chemical Waste Treatment Centre (CWTC) treated 37 500 tonnes of waste (see breakdown in Table 2).

Table 1 - Quantity of municipal solid waste (MSW), C&D waste and special waste disposed of at landfills in 1991-2004

Year	MSW	C&D Waste	Special Waste
2004	3 400	2 410	593
2003	3 450	2 460	580
2002	3 440	3 720	560
2001	3 390	2 340	400
2000	3 410	2 740	400
1999	3 380	2 880	320

Table 2 - Chemical waste collected at CWTC 2004

MARPOL oily water	11 784 tonnes
MARPOL waste	7 254 tonnes
Spent etchants (Non-ammonical)	1 702 tonnes
Land based waste oil	6 177 tonnes
Halogenated, non-halogenated & flammable solvent	2 591 tonnes
Acids	3 172 tonnes
Spent etchants	

1998	3 190	2 570	290
1997	3 170	2 370	230
1996	2 970	2 750	180
1995	2 850	5 150	130
1994	3 080	5 650	140
1993	3 090	4 200	90
1992	2 890	4 370	90
1991	2 700	5 980	120

Quantity (x 1 000 tonnes)

(Ammonical)	2 125 tonnes
Alkalis	1 169 tonnes
Toxic metal & metallic compound	1 306 tonnes
Others (including cyanide/pesticides/PCB wastes etc.)	252 tonnes

The EPD manages three strategic landfills, built in the 1990s to meet waste management needs. Eight refuse transfer stations serve almost six million people and help to reduce the number of vehicle trips to landfills (see map at Figure 1).

Figure 1 - Refuse Transfer Stations and Landfills in Hong Kong.

Achievements in 2004

- Waste Reduction
- Construction Waste
- Waste Facilities
- Other Achievements

Waste Reduction

Our performance

The recovery rate of municipal solid waste decreased slightly from 41% in 2003 to about 40% in 2004. The surge in metals recovery seen in 2003 subsided somewhat, but this was balanced by higher demand for other recyclables. Much of the waste recovery occurs in the commercial and industrial sectors.

Recycling in housing estates

To encourage more domestic recycling, a Waste Recycling Campaign for Housing Estates was launched in 1998. It now covers 1 420 estates and collects paper, aluminium cans and plastic bottles from each block. In 2004 a pilot scheme on source separation of domestic waste was launched. The objective of the programme was to facilitate residents to separate waste at source by providing waste separation facilities on each floor, and broaden the types of recyclables recovered. In addition to the materials collected by the 3-coloured waste separation bins, all metals, plastics and other recyclables were collected and residents were reminded to recycle all uncontaminated paper, not just newspapers and magazines as seen previously. The scheme has been successful and was rolled out territory-wide in January 2005. This scheme was initiated based on experience gained from a trial dry-wet waste separation scheme, which was found to be too expensive to operate.

A resident deposits waste in the waste separation bins in a housing estate.

Other recycling

- The Wastewi$e programme continued to sign on new members, including all public hospitals. Operators set targets to reduce and recycle waste and use recycled products, and membership has reached 771 since 1999.
- About 41 000 used computers and electrical and electronic equipment were collected for re-use and recycling in a one-year pilot scheme ending in December 2004.
- A study on characterising food waste got underway, with the goal of facilitating interested parties to develop on-site treatment in 2005.

Converting food waste for other uses reduces pressure on landfills.

Supporting the recycling industry

- 28 short-term tenancies for recyclers have been secured so far. The tenancies initially lasted only about six months, but by the end of 2004 typically ran for three to five years and had good facilities such as paved surfaces and convenient access.
- Work proceeded on the EIA, land use rezoning plan and infrastructure study for the Eco Park, a 20-hectare site in Tuen Mun Area 38 to provide permanent facilities for recycling. The target opening date is late 2006.
- Product responsibility is being encouraged through a Rechargeable Battery Recycling Programme, which will begin in early 2005 to collect all types of rechargeable batteries. More than 30 producers, importers and retailers have signed up. Meanwhile, a pilot programme to recycle waste tyres was extended to April 2005 and by the end of 2004 had collected 4 600 tonnes of waste tyres, saving HK$3.3 million in landfill disposal costs.

A waste recycling site at Cha Kwo Ling.

Construction Waste

About 38% of waste at landfills is construction waste. In 2004 the Legislative Council passed a bill allowing for construction waste disposal charges. This is expected to reduce construction waste loads by about 20%. The charges are: $100 per tonne to deposit waste at sorting facilities for re-use and recycling; $27 per tonne at public reception facilities for inert waste; and $125 per tonne at landfills for waste that contains less than 50% inert material. The charges will come into effect in the latter part of 2005.

Waste Facilities

Existing landfills
The three strategic landfills are running out of space and the EPD has proposed to extend them. Relevant stakeholders were consulted in 2004 on the scope of feasibility and EIA studies, which will begin in 2005. District Councillors and Legislative Councillors were invited to visit some of the sites, and the public was invited to comment on the potential environmental impacts of the extension schemes. The EIA study briefs will include a requirement that 3-D public engagement tools be used, to enhance public understanding of the proposals.

An agreement has also been signed with a landfill contractor on off-site utilisation of landfill gas. The landfill gas will be used as substitute fuel for the production of town gas.

Integrated Waste Management Facilities
Integrated Waste Management Facilities (IWMF) will be needed to reduce the bulk of waste. 59 Expression of Interest proposals have been received, suggesting possible technologies for IWMF. An advisory group and five sub-groups of mostly non-officials, suggested 129 criteria for assessing the proposals. Two view-sharing sessions were held with stakeholders in November 2004, including academics, green groups, professional institutions and public utilities. A full public consultation on the possible technologies will be held in 2005.

Other Achievements

Sludge: A study was commissioned to develop treatment facilities for sludge, which is expected to increase from 800 tonnes per day now to more than 2 000 tonnes per day when the next phase of the Harbour Area Treatment Scheme is commissioned (see 5.2d Better Water Quality for details).

Clinical Waste: A bill to control clinical waste was submitted to the Legislative Council in June 2003 but the Council did not have time to consider the bill in the 2003/04 legislative year. The bill will be re-introduced in early 2005.

Low-level Radioactive Waste: A storage facility for this waste is being built on Siu A Chau and is expected to be commissioned in 2005.

Risk-based Remediation Goals for Contaminated Land: These have been drafted and were being considered by the Environment, Transport and Works Bureau at the end of 2004.

Workshop on Dioxins: The EPD attended an international conference in Hangzhou on dioxins and hosted a workshop in Hong Kong with officials from the United States Environmental Protection Agency.

Chemical Waste: A study was commissioned in 2004 to inspect the Chemical Waste Treatment Centre at Tsing Yi and to determine the future chemical waste treatment requirements after 2008.

Re-use of Closed Landfill: The Sai Tso Wan Recreation Ground, the first permanent recreational facility built on a restored landfill in Hong Kong, was opened for use by the public in April 2004.

The jogging track at Sai Tso Wan Recreation Ground is paved with recycled material.

5 Our Contribution to the Environment

5.3 Effective Enforcement and Emergency Response

Our Responsibilities

We aim to establish an effective legislative and efficient control framework in order to safeguard the health and welfare of the community from any adverse environmental effects. We will actively encourage businesses and other organisations to adopt pollution control measures. We have an emergency response system for handling environmental incidents and are prepared to respond quickly to minimise the damage to the environment.

Regular Enforcement Activities

The EPD handles environment-related licensing and permits for operators, responds to complaints, prosecutes offenders and develops partnerships with polluting industries. The latter is described in 5.4 Building Partnerships and Customer Service.

In 2004 we:

- issued more than 6 600 licences and permits as seen in Table 1;
- conducted more than 61 000 routine and targeted inspections;
- responded to 62 695 calls on enquiries and pollution complaints to our Customer Service Centre and investigated 23 229 pollution complaints. Vehicle emissions topped the list of complaints in Table 2; and
- successfully prosecuted 485 offenders (see Table 3 - Breakdown by Ordinance).

Complaints were up slightly from 2003 due to an increase in smoky vehicle complaints, which may reflect public concern about air pollution. The police work with the EPD to control smoky vehicles and can hand out $1,000 fixed penalty tickets. The police also investigated 3 228 pollution complaints in 2004, bringing the complaints total to 26 457. Pollution complaints have increased significantly since 1986 but are down from a peak in 2000, as seen in Figure 1.

Prosecutions are also down since 2000, but more companies are pleading not guilty. A Central Prosecution Unit (see Re-organisation below) deals with these cases, guided by the EPD's prosecution policy. Two defendants received suspended prison sentences in 2004.

For further information on prosecutions and complaints, see Resource Materials of Chapter 9 Environmental Compliance in Environment Hong Kong 2005.

Table 1 - Licences and Permits Issued in 2004

Ordinance	Activities	No. Issued
APCO	Chimney Approval	268
	Specified Process Licence	7
	Open Burning Permit	1
	Sub Total:	276
NCO	Construction Noise Permit (Percussive Piling)	194

	Construction Noise Permit (General Construction Work -Total)	2 579
	Sub Total:	2 773
WDO	Registration of Chemical Waste Producer	662
	Chemical Waste Disposal Licence	15
	Chemical Waste Collection Licence	35
	Waste Import and Export Permit	5
	Sub Total:	717
WPCO	New Licence	1 772
	Licence Renewal	860
	Sub Total:	2 632
DASO	Marine Dumping Permit	143
	Sub Total:	143
Other	Clinical Waste Disposal Permit	118
	Sub Total:	118
	Total:	6 659

Table 2 - Complaints Breakdown by Media

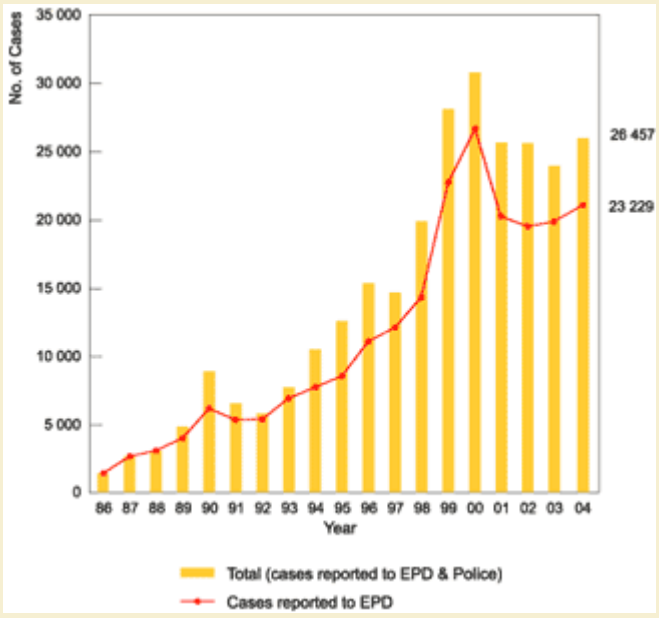
Nature		2004
Air	Vehicle Emissions	7 640
	Other	5 671
Noise*		6 200
Waste		1 192
Water		2 407
Miscellaneous		119
	Total	23 229

* Excluding complaints handled by Police (The police investigated 3 228 cases in 2004)

Table 3 - No. of Convictions in 2004 - Breakdown by Ordinance

Ordinance	Total
APCO	191
DASO	1
NCO	112
WPCO	66
OLPO	1
WDO	114
EIAO	0
Total	485

Figure 1 – Number of Pollution Complaints



Achievements in 2004

Re-organisation

The Local Control Division changed its name to the Environmental Compliance Division in 2004 to reflect the importance of partnerships and customer service in controlling pollution. This helped to streamline operations ahead of the EPD's re-organisation in 2005. Other measures included:

- Dividing the division into four regions (North, South, East and West), as opposed to six groups. A new compliance assistance group was also established.
- Taking over enforcement of territory-wide issues, such as dumping at sea, waste imports and exports and asbestos control, from management groups.
- Taking over enforcement of environmental permit conditions under the Environmental Impact Assessment Ordinance.
- Extending integrated enforcement to all offices, in which inspectors are trained to detect all types of pollution rather than specialise.
- Preparing for the Central Prosecution Unit to report directly to the Deputy Director after the department's re-organisation in April 2005, in line with the Department of Justice policy to keep investigation and prosecution sections under separate management.
- Preparing to implement land-based mobile computing in 2005.

The EPD prosecution team is actively involved in upholding compliance of environmental laws.

Working with Others

Other government departments: The EPD works with other government departments on a wide range of issues. In 2004 we set up a team with the Drainage Services Department, Food and Environmental Hygiene Department, Highways Department and Home Affairs Department to tackle sewage odour from storm water drains in Kennedy Town. We also worked with the Planning, Immigration and Customs and Excise departments to control the recycling of plastic bottles and electronic waste in the New Territories. Recycling activities increased here after the Mainland tightened control over waste shipments for recycling from early 2004.

A joint operation of the EPD and Customs and Excise Department stopped the illegal export of glass waste from cathode ray tubes.

EPD and Drainage Services Department staff jointly investigate a sewer odour problem in Kennedy Town.

Other governments: The EPD worked with other governments to control waste shipments in 2004. On electronic and plastic wastes, we worked with the Mainland and the source countries of Canada, Japan, South Korea, Australia, and member states of the European Union. In December 2004 we attended the inaugural meeting of the Asian Network for the Prevention of Illegal Transboundary Movement of Wastes, which was initiated by Japan. We also continued to work closely with the European Union's Network for Implementation and Enforcement of Environmental Law.

Performance Pledge

The EPD complied with all but one of the targets in its Performance Pledge relating to the processing of applications for permit and license approval, and the response to complaints. Two asbestos abatement plans took slightly longer than 28 days to process (30 days in one instance, 33 days in the other), due to a surge in workload at the time. However, this did not affect the commencement of the asbestos abatement work. Targets and results can be seen at Table 4. Preparations were made in 2004 to enable applications, payment and permit issuing to be processed on-line, through the Environmental Protection Interactive Centre (EPIC). This service will be launched in March 2005, and the module to enable the public to obtain environmental data has already been introduced since October 2003.

The complaints handling system was fine-tuned in 2004 by improving referrals to other departments for complaints outside the EPD's jurisdiction. A survey of customers found an 85% satisfaction rate, comparable to previous surveys.

Table 4 -Our Performance in Processing Applications for Permit/Licence/Approval and in Response to Complaints in 2004

Our Service		Target for 2004	Achievement* in 2004
Air	Registration of Asbestos Works	70 calendar days	100%
	Asbestos Abatement Plan	28 calendar days	98%**
	Asbestos Management Plan	28 calendar days	100%
Waste	Registration of Chemical Waste Producer	95% in 30 calendar days	100%
	Marine Dumping Permit	90% in 18 calendar days	100%
	Clinical Waste Disposal Permit	95% in 9 calendar days	100%
	Part A Chemical Waste Notification	95% in 12 calendar days	100%
Water	Water Pollution Control Ordinance licence (Excluding licences requiring public	95% in 14 working days after receipt of payment	100%

	notification)		
Response to Complaints	Incidents involving immediate threat to health	Immediate	100%
	Other pollution complaints	95% in 3 working days	100%

Note:
* This refers to the percentage achieved against the targets, with 100% representing full compliance or exceeding the targets.
** Within 2004, two of the asbestos abatement plans were not processed within 28 days (1 was 30 days, and the other was 33 days)

Other Enforcement Work

Design and development work began on an Environmental Information Management System that will provide an integrated database for EPD officers. The system will start operating in early 2006.

In 2004, 38 external seminars were provided for 4 123 participants on environmental pollution laws and enforcement and compliance related issues.

The sewerage connection programme linked 206 village houses and 1 553 villagers in the New Territories to a proper sewerage system in 2004. Since 1995, 3 881 village houses and 28 440 villagers have been connected.

Response to Emergency Incidents

The EPD works closely with other government departments such as the Fire Services Department, Marine Department and Government Laboratory to provide a speedy response to environmental incidents. Comprehensive response plans are in place to deal with 36 different types of emergency situations on land and at sea, including oil and chemical spills. In 2004 the EPD was involved in 37 land-based incidents and 2 marine-based incidents, which were all resolved satisfactorily.

5 Our Contribution to the Environment

5.4 Building Partnerships and Customer Service

Our Responsibilities

We will work with others and continue to build new partnerships in the pursuance of sustainable development objectives.

We actively encourage businesses and other organisations in Hong Kong to adopt environmental management systems and pollution prevention measures.

Working with Partners

Working with Partners - Locally

Formal Partners

The EPD has established formal partnerships with the construction industry, vehicle repair workshops, restaurants and property managers to promote greater compliance with environmental laws. In 2004 a helpdesk service was set up offering a one-stop source of environmental information for each sector, and arrangements were made to enable application, payment and issuing of permits and licenses online. Other highlights in 2004 included:

- a conference on general environmental issues and good work practices, organised in June with the Hong Kong Construction Association and the Environment, Transport and Works Bureau. More than 160 people attended. Another 500 participants attended a workshop on green construction practices organised in October by the EPD and HKCA.
- a symposium on pollution control technologies for restaurants, organised in February. More than 600 people attended. A mooncake container recovery campaign in the autumn organised by the EPD collected more than 42 000 tin cans.
- the first Green Garage Election 2004, in which 160 garages participated. The event was co-organised by the EPD, Hong Kong Vehicle Repair Merchants Association and Environmental Vehicle Repairers Association. Judging was based on a green guidebook for garages, released in January.
- a free audit of residential housing estates, as part of a district-based building management competition. Property managers were also involved in a trial programme to separate waste on each floor of housing blocks. 159 were also trained as Environmental Protection Ambassadors for Property Management to help in green campaigns.

EPD partnership programmes with trades: (Clockwise from top left) 1) Restaurants; 2) Construction Industry; 3) Property Management Companies; and 4) Vehicle Repair Workshops.

Government Partners

The EPD held over 50 training sessions for about 900 civil servants in 2004. The programmes cover such topics as green office, green living, waste reduction, eco-driving and green consumerism, and more targeted training has been organised for the works departments. The EPD and Highways Department also completed a six-month exchange to enhance awareness about each other's operations. We also work with the Government Logistics Department to establish green specifications for commonly used products, such as paper. By the end of 2004, 37 product categories carried green specifications. Details are available on the EPD website.

Waste Partners

The EPD has helped the Airport Authority, hotels, tertiary and vocational institutions, the recycling trade, the packaging trade, retailers and others to prevent and reduce waste. Assistance is provided through regular discussion forums, ad hoc meetings and dedicated programmes such as the Wastewi$e Scheme and product responsibility schemes (see 5.2e Environmentally-Sound Waste Management and Facilities for details).

EIA and Corporate Environmental Management Support

An EIA Ordinance Support Section provides a helpdesk and other services for government and the private sector, and four User Liaison Groups on the EIAO have been set up with government works departments, consultants, contractors, and private developers. In 2004 we also started offering support to small and medium enterprises (SME) on environmental management (see 5.2a Prevention and Mitigation Through Environmental Impact Assessment for details).

Consultation

Formal consultation on environmental issues is conducted through the Advisory Council on the Environment and the Environmental Affairs Panel of the Legislative Council. The EPD also participates in District Council, industrial and business association meetings to explain new initiatives and seek views. Regular meetings are held with green groups for view sharing. The Environmental Campaign Committee has frequent liaison and works with District Councils, green groups and community groups on waste reduction and awareness-raising campaigns.

Working with Partners - Nationally

National

In 2004 the EPD's links with the Mainland were deepened further, when formal blanket approval was received for regular exchanges and co-operation with the State Environmental Protection Agency (SEPA) on EIA related matters. Previously, each exchange required approval from the Hong Kong and Macau Affairs Office. The EPD also was a co-organiser of the 1st China International Forum on Environmental Impact Assessment. (See 5.1 Our Contribution to Strategic Decision-making for details.)

Guangdong

Hong Kong and Guangdong are working together on a variety of cross-border issues. Working groups have been set up on regional air and water pollution and jointly worked on the development of the Pearl River Delta region water quality model and environmental management in Deep Bay and Mirs Bay. There is also close liaison over such projects as the Tonggu Channel of the Shenzhen Port, the Hong Kong-Zhuhai-Macau bridge and the Shenzhen Western Corridor.

Workshops and Conferences

The EPD attended a workshop on persistent organic pollutants (POPs) and a conference on incineration technology for waste in Hangzhou in October. A week-long visit to Shanghai mid-year focused on hazardous waste and waste management, and included meetings organised by the working groups of the International Solid Waste Association and site visits to a municipal waste incinerator and a chemical industrial park. In Hong Kong, Mainland authorities attended a Motor Vehicle Emissions Control Workshop 2004 organised by EPD, which included experts from the US and elsewhere in Asia. The EPD, ECC and SEPA also organised a Nation-wide Environmental Competition for Youths of Mainland China and Hong Kong featuring "Caring for Our Water Resources", which attracted more than 400 000 entries.

EPD delegates visit the Jiangqiao municipal solid waste facility in Shanghai.

Working with Partners - Globally

A workshop on dioxin pollutants was organised by the EPD in Hong Kong with the US Environmental Protection Agency, in advance of the conference in Hangzhou (see above).

A workshop on the planning and management of sewerage systems and the control of urban storm water pollution was organised by the EPD in Hong Kong with participation from our counterparts in Tokyo and Toronto.

The EPD also organised a workshop on pig waste treatment that brought together experts from China and Malaysia and farmers from Hong Kong.

The EPD was invited to give presentations at the United Nations Environment Programme's first regional training programme on environmental law in Tianjin.

The department also attended a workshop on enforcement issues and environmental impact assessment with Environment Canada in Vancouver. Hong Kong and Canada have a Memorandum of Understanding on Environmental Protection dating back to 1992.

The EPD organises a workshop on stormwater pollution with overseas counterparts.

5 Our Contribution to the Environment

5.5 Environmental Awareness and Education

Our Responsibilities

We aim to promote community awareness through environmental campaigns, publicity, education and action programmes, and public access to environmental information, with a view to harnessing the community's support for, and contribution to, achieving the desired environmental goals.

Connecting with the Public

The EPD operates a wide range of programmes that reach every sector of society, as described below. Our website is also an important tool for communicating with the public and operators, in a green, paper-less manner. In 2004 the website was enhanced to make it more reader friendly and to conform to the Government-wide design format of Common Look and Feel. We are also continuing to place environmental resource materials and information about our programmes and facilities on our website, to provide the public with easy access to the latest information.

Achievements in 2004

Community Relations Unit

The Community Relations Unit is the main co-ordinator of the EPD's community education programmes, as well as the secretariat to the government-appointed Environmental Campaign Committee (ECC), which organises community participation programmes. In 2004 the Unit:

- organised 126 training workshops and visits;
- delivered 346 talks and seminars;
- set up 68 exhibitions;
- worked with 4 388 organisations on environmental programmes; and
- organised 1 216 guided tours of the EPD's Visitors Centre and the Environmental Resource Centres, for over 130 000 local and overseas visitors.

The EPD organizes training programmes for different government departments.

Campaigns

Waste: Waste reduction continued to be the main focus of campaigns in 2004. The Waste Reduction Campaign in Housing Estates has accumulated 1 420 participants since 1998, as seen in Table 1. Paper, aluminium cans and plastic bottles are collected from each block of an estate. In 2004, in an effort to expand the scheme, the pilot programme on "Source Separation of Waste" (also known as "Super 3R") was launched to collect a wide range of recyclables on each floor of apartment blocks (see also 5.2e Environmentally Sound Waste Management and Facilities for details). In addition, $5.33 million was granted to green groups and community groups for 22 waste recovery projects in 2004 under the Government's Environment and Conservation Fund. Another $0.34 million was granted during the year to fund 19 environmental education and community action projects related to waste recovery.

Table 1 - The Waste Recycling Campaign in Housing Estates.

Phase	No. of estates	No. of households
I	41	160 000
II	132	458 000
III	300	809 000
IV	716	1 193 000
V	1 050	1 429 000
VI	1 218	1 527 000
VII	1 384	1 597 000
VIII	1 420	1 613 000

Annual events: Two annual campaigns are held. World Environment Day, held June 5 each year, was celebrated in 2004 under the theme "Reduce Waste, Make Polluters Pay". More than 60 000 school staff, Student Environmental Protection Ambassadors and members of the public participated in games booths, workshops, district activities, environmental activities and green trail walks organised by 27 green groups and non-government organisations. The second annual campaign, the Environmental Protection Festival, was scheduled for January 2005 rather than the end of 2004, to enable the event to be tendered out to community and green groups on a trial basis. The slogan is "Love Our Nature, Separate Waste at Home".

Dr Sarah Liao, Secretary for the Environment, Transport and Works (third from left, front row), Mrs Rita Fan, President of LegCo (second from left), Mr Rob Law, former Director of Environmental Protection (far left), together with artist Ms Nancy Sit and other officiating guests, kick-start the Green Trail Walk to echo World Environment Day 2004.

Schools

Waste: Waste separation and recycling bins have been installed in 1 192 schools since 2002, funded by the Hong Kong Jockey Club Charities Trust. The remaining 100 or so schools do not have space. Another 870 pre-schools have mini-bins to use as teaching tools.

Education: To supplement the school curriculum, the EPD produced subject-specific environmental teaching materials for primary and secondary schools, covering general studies, visual arts, integrated

science, geography, chemistry, biology, physics, economics, public affairs and social studies. The Education and Manpower Bureau provided comment on the materials, which are linked to the Hong Kong syllabus, and green groups helped to prepare them. In addition, 17 environmental education training workshops on various topics were held for 823 teachers.

SEAS cum SEPAS: The ECC operates the School Environmental Award Scheme (SEAS) cum Student Environmental Protection Ambassador (SEPA) Scheme to promote involvement in environmental issues. The number of participating schools and students has grown steadily since these programmes began in 1995, as seen in Figures 1 and 2. In the 2004/05 school year, 11 975 students from 750 schools were made SEPAs at the end of 2004. The EPD has also trained 486 teachers to assess SEPAs for the Basic Environmental Badge since the badge system was launched in the 2003/04 school year.

Figure 1 - Number of Schools Participating in the School Environmental Award Scheme since 1995

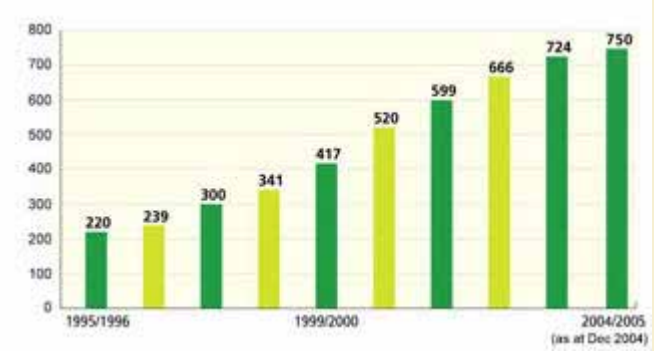
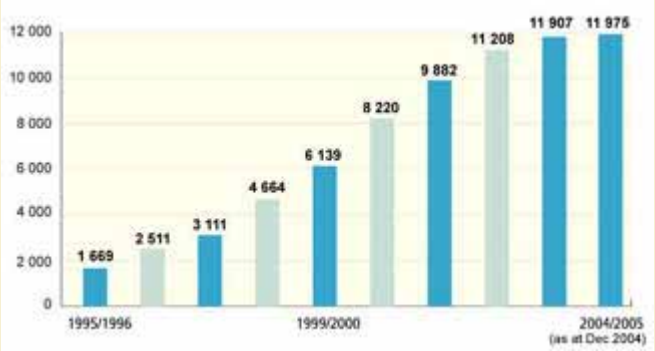


Figure 2 - Number of Student Environmental Protection Ambassadors since 1995



Green School Awards: These awards were launched in 2000, with sponsorship from the Bank of China (Hong Kong) Limited. In 2003/04, 186 primary and secondary schools participated and 31 primary and 22 secondary schools achieved Green School status. Additionally, 27 pre-schools were awarded Green Pre-school status.

Other sponsored events: The ECC MTR Environmental Award for Schools organised a leadership camp in 2004 for outstanding and merit SEPAs, Girl Guide, Scout and Junior Police Call Environmental Protection Ambassadors, and youths from the Pearl River Delta region. The annual ECC AEON Environmental Award for Schools funded an environmental study visit to Japan for 10 outstanding SEPAs. Hong Kong Disneyland continued to promote the "Jiminy Cricket's Environmentality Challenge", which in 2003/04 had more than 40 000 student participants. Swiss Reinsurance Company sponsored the Nation-wide Environmental Competition for Youths of Mainland China and Hong Kong featuring "Caring for Our Water Resources", in which more than 400 000 primary, secondary and university students participated. The competition was organised jointly by the EPD, ECC and the State Environmental Protection Administration.

Students from American International School, the Grand Prize winner of the Jiminy Cricket Environmentality Challenge, present their winning report on "Let's Reduce Lunch Litter" to guests.

Wait Green Engine Off: More than 1 300 students supported this campaign in 2004 after the EPD wrote to schools seeking their support. The students, from 81 schools, approached more than 5 600 drivers near their campuses to inform them about the campaign.

Other Community Activities

An environmental education programme on the Harbour Area Treatment Scheme (HATS) featured a series of road shows and exhibitions and attracted more than 38 000 people. More than 200

Environmental Protection Ambassadors helped to disseminate information about the scheme through their networks and their participation as volunteers in the road shows and exhibitions. Up to February 2005, 46 schools had applied to host a school roving exhibition on HATS (see also 5.2d Better Water Quality for details).

Environmental Protection Ambassadors participate in the kick-off ceremony of the environmental education programme and briefing session on the Harbour Area Treatment Scheme.

The sixth Hong Kong Eco-Business Awards attracted 107 entries in the categories of Green SME, Green Construction Contractor and Green Innovative Practice. The awards are jointly organised by the ECC with The Chinese General Chamber of Commerce, Hong Kong General Chamber of Commerce and Hong Kong Productivity Council.

In 2004, the Environmental Resource Centres in Fanling, Wan Chai and Tsuen Wan, as well as the Mobile ERC, attracted more than 130 000 visitors.

The Community Green Network Programme teams set up 123 "green desks" at shopping malls and other public places to answer enquiries, and gave 39 talks to members of mutual aid committees and owners' incorporations.

The Environmental Education and Information Centre answered 11 086 enquiries, received 6 311 visitors, provided 606 lending services and served 960 organisations.

The Environmental Protection Ambassador (EPA) scheme trained 159 property managers. EPA schemes are also in place for Scouts, Girl Guides, Junior Police Call, the Lions Club, the Rotary Club, the Zonta Club, the elderly and housing estate residents.

Press Releases and Publications

The EPD aims to make environmental information widely available to the general public. Press releases are issued regularly and the Internet is increasingly used to disseminate information.

- Weekly press releases on water quality at gazetted bathing beaches are issued to the media. The press releases and reports on beach water quality are uploaded on the EPD website.
- Hourly Air Pollution Indexes have been issued since July 1999 via the EPD website and a telephone hotline. Daily API forecasts and hourly API reports are issued to the media.
- Statistics on environmental prosecutions brought by the EPD are released to the media on a monthly basis and also posted on our website.
- A list of environmental impact assessments (EIAs) that are either in progress or about to start is released quarterly to the media. The EIA reports, and the Director of Environmental Protection's decisions on the reports, are placed on the EPD website.
- Monitoring data for rivers and streams and marine waters are published in separate annual reports, as are air and beach water monitoring data.
- The Environmental Protection Interactive Centre (EPIC) on the EPD website lets the public set parameters for the information they are seeking. It will soon be used for application, payment and issuing of permits and licenses.

In addition, the EPD produced 31 publications in 2004 ranging from publicity and training materials to guidelines on new services and initiatives. Most publications and other information from the department can be viewed on the EPD website.

During the year, three media visits were organised to the following sites: the West New Territories

Landfill, the North New Territories Landfill and a green vehicle repair workshop. The EPD also handled 7 222 press enquiries, issued 182 press releases, organised four press conferences and briefings, and arranged 144 press interviews.

5 Our Contribution to the Environment

5.6 Professional Development and Research

Our Goals

We will ensure through appropriate training and professional development, that every member of our staff has the knowledge and competency to assume their environmental responsibilities and to participate constructively in environmental activities.

Overview

The EPD employs 1 213 professional and technical staff with backgrounds in science, applied science, town planning and engineering. We are the largest employer of environmental experts in Hong Kong and many staff are active members of learned societies in their fields of expertise. We contribute to the development of the environmental management profession in Hong Kong and elsewhere by offering continuous training to staff, collaborating with researchers, providing advice, writing for outside publications and organising conferences, seminars and staff exchanges.

Highlights of 2004:

- Formal blanket approval was received for regular exchanges and co-operation with the State Environmental Protection Administration of China (SEPA) on EIA related matters. Three EPD staff spent one month at SEPA's head office in Beijing in the autumn. The Assistant Director for Environmental Assessment and Noise, Mr Elvis Au, also contributed to two major training sessions for professionals and officials on the Mainland.

- The Environment, Transport and Works Bureau and the EPD helped to co-organise the 1st China International Forum on Environmental Impact Assessment, together with the Appraisal Centre for Environment and Engineering of SEPA, Hainan Province's Land, Environment and Resources Bureau, the Chinese Society for Environmental Scientists and the International Association of Impact Assessment. The event was held in BoAo on Hainan Island in December 2004 and attracted more than 280 participants.

- EPD staff attended a workshop on persistent organic pollutants in Hangzhou in October that was sponsored by SEPA, Japan's Ministry of Environment, the United States Environmental Protection Agency (USEPA) and Environment Canada. They also attended a conference on incineration technology for waste that followed the workshop. Immediately prior to the Hangzhou meetings, the EPD and USEPA hosted a workshop in Hong Kong on dioxins.

EPD Officers visit a municipal waste treatment centre in Hangzhou in October.

- EPD staff joined a Mainland delegation in March for a regional workshop in Beijing on the implementation of the Rotterdam Convention. The workshop was organised by the United Nations Environment Programme (UNEP).

- EPD staff joined a delegation to Japan and Korea in November to visit waste management facilities there. The delegation was led by the Permanent Secretary (Environment) and comprised 11 non-official members of the Advisory Group and Sub-Groups on Waste Management Facilities.

- Principal Environmental Protection Officer, Mr Patrick Lei, gave a presentation on Hong Kong's experiences managing waste during outbreaks of bird flu and SARS, to fellow members of the International Solid Waste Association's (ISWA) healthcare waste working group. The presentation was made during a week-long visit led by former Deputy Director, Mr Mike Stokoe, to Shanghai mid-year that focused on hazardous waste and healthcare waste management. The delegation also visited the municipal waste incinerator and the chemical industrial park in Shanghai.

- Mr Patrick Lei, together with Mr James Pong and Dr Alice Chan, also attended the first UNEP regional training programme on environmental law in Tianjin in August, and gave a presentation on Hong Kong's policies and practices. EPD staff also visited the economic-technological development area and the hazardous waste treatment and disposal centre in Tianjin.

Mr Patrick Lei, Principal Environmental Protection Officer of EPD, (second from left) meets Mr Xing Zheng-gang, Director of Tianjin EPB (centre), at the UNEP 4-day Programme for Environmental Policy and Law held in Tianjin in August.

- EPD staff joined a delegation organised by the Hong Kong Waste Management Association to Shanghai in February to visit waste management facilities there, together with representatives from the Highways Department, university and subvented organisations, and the private sector.

- The EPD organised two workshops on clinical waste control delivered by our counterparts from the UK and Victoria State, Australia, and a separate workshop on the improper disposal of waste delivered by our counterpart from the UK.

- Technical exchanges on air pollution control and monitoring continued with Guangdong. The EPD also was closely involved in setting up the Guangdong Province Quality Assurance Laboratory to support the regional air quality monitoring network.

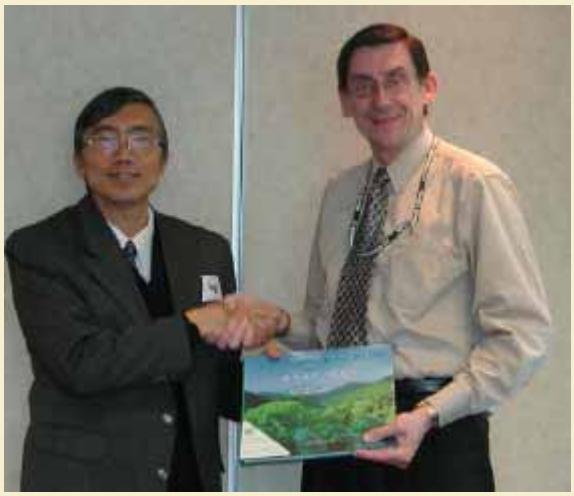
- A standard reference photometer (SRP) was obtained from the US National Institute of Standards and Technology, providing a regional calibration standard for ozone measurement. Macau, Beijing, Guangdong and other environmental authorities are checking their ozone calibrators against our SRP.

- The EPD together with State Environmental Protection Administration organised the Motor Vehicle Emissions Control Workshop 2004 (MoVE 2004) to exchange technology and experiences. Local environmental bureaus from the Mainland were also invited. Workshop attendees included local trade representatives and experts from the Mainland, United States, European Union and other Asian countries.

- A workshop on pig waste treatment was held in February with experts from the South China Agricultural University and the Universiti Putra Malaysia. More than 150 farmers attended, as did about 100 staff from the EPD and Agricultural, Fisheries and Conservation Department.

- EPD staff attended the inaugural meeting of the Asia Network for the Prevention of Illegal Transboundary Movement of Wastes in December 2004. The network was initiated by Japan.

- Two events were organised under the Memorandum of Understanding on Environmental Protection with Environment Canada. A workshop on enforcement was held in Vancouver in March and a workshop on environmental impact assessment was held in April.



Dr Mike Chiu, Deputy Director of EPD, presents a souvenir to Mr Martin Pomeroy of the Enforcement and Emergencies Division, Environment Canada at a workshop on enforcement issues held in Vancouver in March.

- The Assistant Director for Environmental Compliance, Mr Benny Wong, was invited by the Organisation for Economic Co-operation and Development (OECD) to attend a workshop in Tokyo in December 2004 on "Environmental Policy Instruments for Water Quality Management: Identifying OECD Practices Relevant for Emerging Market Economies". He was asked to share Hong Kong's experience in the use of permits to control water pollution.

- The EPD organised a workshop on the management of pollution in urban storm-water systems, which was attended by our counterparts in Tokyo and Toronto.

- The EPD continued its close liaison with government works departments, consultants, contractors, private developers and public corporations on the operation of the EIA Ordinance. To promote the concept of Continuous Public Involvement, joint seminars were organised in May and June 2004 with more than 450 participants from different sectors.

- The EIAO Support Section held 13 EIA Training and Capacity Building Workshops for 430 participants from government departments, private and public sector corporations, contractors, and professional bodies. It also launched an e-learning platform on the EIA mechanism on the EPD website to inform the public and project proponents about the EIA process so they can better understand and apply it.

- EPD staff wrote a number of papers on a wide range of environmental issues during the year, which were published in professional journals and presented at conferences and workshops.

- The EPD continued to serve on the fund-vetting committees of the Innovation and Technology Fund and the Environment and Conservation Fund, which help finance education and research projects in the environmental field.

Environmental Graduate Training Scheme

The EPD employs more than 190 professional engineers in various fields and recognises the need to train future generations of professional environmental engineers. The department has been certified for the Hong Kong Institute of Engineers' Scheme "A" Training since 1997. 24 environmental engineering graduates have received on-the-job training with the EPD so far, acquiring project management skills, enforcement experience and environmental impact assessment knowledge. 15 graduates completed their training in 2004.

Senior managers share their views on environmental issues.

6 Our Own Operations

6.1 Corporate Environmental Management and Safety & Health Management

Our Responsibilities

We will ensure that all services and programmes offered by the EPD, as well as our own internal operations, are developed and conducted in an environmentally responsible manner.

We will implement ISO 14001 environmental management systems to improve continually the environmental performance of our major facilities.

We will review our Environmental Policy and the department's environmental objectives and targets vis-a-vis the changing internal and external factors, and seek continual improvement in our environmental performance.

We are committed to achieving a high standard of safety and health for all our staff and others who may be affected by our activities. We shall provide all necessary resources and employ sound management practices to implement our policy, and provide training, information and guidelines to our staff so that they are competent to perform their duties in a safe and healthy manner. Also, we shall pursue continual improvement in safety and health by regularly reviewing our performance.

Environmental Policy

The Green Policy Statement was first issued in 1996, personally signed by the Director of Environmental Protection. It was later re-written in 2000 to include the department's response to environmental incidents and the development of partnerships in pursuance of sustainable development objectives. The Statement was revisited in 2004 by the Departmental Environment, Safety and Health Committee (DESHC – see below) to strengthen our commitment, under Management Review, to seek continual improvement of our environmental performance.

Departmental Environment, Safety & Health Committee

The Departmental Environment, Safety and Health Committee (DESHC) is responsible for reviewing the EPD's environment, safety and health management systems and ensuring their continuing suitability and effectiveness. The committee provides direction and strategies, sets targets, monitors progress and is consulted on internal operations with regards to environmental, safety and health issues.

The DESHC was formed in 2002, when green management and safety and health management were merged. It is chaired by the head of our Corporate Services Division and has representatives from all six divisions in the EPD.

Support for the DESHC is provided by the Environment, Safety and Health Unit (ESHU), which takes an integrated approach to its work. Audits are conducted on the safety and environmental management practices of selected groups within the department. In 2004, 48 environmental self-audits were completed. The unit also monitors internal operations and daily activities with potential environmental impacts. This has resulted in improvement programmes being devised to save paper and electricity, and the appointment of Energy Wardens in each branch office to strengthen housekeeping measures that reduce electricity consumption. The ESHU, as well as individual groups in the EPD, also report on overall performance in green management to the DESHC. Further details on safety initiatives are provided below.

Safety and Health & CISPROS Certification

The ESHU devises safety and health programmes and practices in the department. Staff training needs are regularly reviewed and safety induction and training are provided to keep staff up to date on safety performance. We were the first government department to receive certification under the Occupational Safety and Health Council's Continual Improvement Safety Programme Recognition of System (CISPROS), and also the first to obtain renewal of our certification. There has been continual improvement in the occupational injury rate since we were first certified in 2001 (see Table 1 - EPD Incidents Statistics).

The EPD is keen to introduce new initiatives to improve safety and health. Purpose-built manhole cover lifters were introduced in 2003 and the ESHU is also sourcing other safety equipment applicable for manhole cover lifting, to further reduce the risk of injury.

Dr Mike Chiu, Deputy Director of EPD, receives the CISPROS certificate from Mr PK YU of the Occupational Safety & Health Council.

Table 1 – EPD Incidents Statistics

Year	EPD's Occupational Injury Rate (Per 1 000 staff)	Labour Department Figures for Occupational Injury Rates Covering All Major Economic Activities (Per 1 000 workers)
1999	5.6	24.3
2000	5.6	23.3
2001	0.6	21.6
2002	3.7	19.2
2003	0	17.7
2004	1.25	Not yet available

ISO 14001 Certification

The EPD aims to continuously improve on its environmental performance and set an example to other government departments and the private sector. Our Waste Facilities Business Unit renewed its ISO14001 certification for 3 years in 2003. The Unit also requires contractors of new waste management facilities to obtain ISO 14001 certification.

6 Our Own Operations

6.2 Minimising the Impacts of Our Operations

Our Responsibilities

We aim to avoid, reduce and control pollution arising from our day-to-day working practices. We will require our contractors to adopt and implement sound environmental management systems and pollution control measures.

We will provide leadership by complying with not only the letter, but also the spirit of all applicable environmental legislation, standards and regulations, as well as our internal guidelines and procedures. We will endeavour to surpass the applicable environmental legislation, standards and regulations, whenever possible.

We have an emergency response system for handling environmental incidents, and are prepared to respond quickly to minimise the damage to the environment.

Pollution Control at Waste Facilities

The EPD's major impact on the environment comes from the operation of 26 waste facilities. A range of legal, contractual and technical controls are in place to reduce their impacts. In 2004, none of our waste management contractors was prosecuted for environmental offences. They also achieved 99.983% compliance with contractual environmental requirements, similar to 2003. Each non-compliance was thoroughly investigated and remedial action instigated.

Some 42 complaints were received against waste facilities in 2004, concerning floodlights, operations, wastewater, odour, noise and fly nuisance. All complaints were dealt with promptly (see 5.3 Effective Enforcement and Emergency Response for details of our complaints response system).

Further details of pollution control at waste facilities – covering legal and contractual requirements, landfills, refuse transfer stations, the Chemical Waste Treatment Centre and ISO 14001 certification – are provided below.

Legal and contractual requirements
Contractors are required to operate waste facilities to a high environmental standard, through both contractual requirements and statutory controls. They must comply with all applicable environmental ordinances, regulations and emission requirements, and ideally exceed them. They must also monitor air, noise and wastewater emissions from waste facilities, under the supervision of the EPD. Since 1989, a provision has been included in waste facilities contracts to deduct payment for non-compliance with environmental controls.

Landfills
All new landfills are installed with gas extraction systems, and old landfills are being retrofitted. In 2004, an average 0.6 million cubic metres of landfill gas was collected daily, 46% of which was used to meet nearly all on-site energy needs. Electricity generators with a total capacity of 7.6 MW have also been installed at landfills. In 2004, the EPD signed an agreement with the North East New Territories (NENT) Landfill contractor to allow landfill gas to be sold to public utilities operators. We also monitor gas levels at the boundaries of landfills, to ensure landfill gas does not escape.

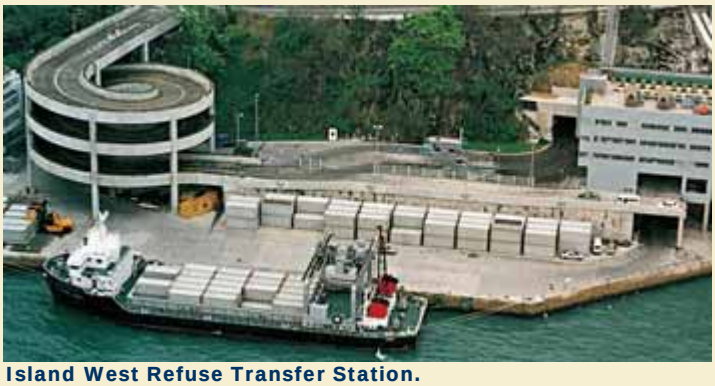
Mr Rob Law, former Director of Environmental Protection, and Mr James Tam, Managing Director of Far East Landfill Technologies Ltd. at the signing ceremony of the Supplemental Agreement of NENT Landfill Gas Project.

A construction waste sorting facility has been operating at the South East New Territories (SENT) Landfill since 1995. At present, the plant processes about 22 500 tonnes of construction waste monthly, representing 15% of the total construction waste intake at the landfill. A charging scheme to be implemented in 2005 for the disposal of construction waste at landfills, sorting facilities and public fill reception facilities, is expected to increase recycling and recover the costs of handling construction waste (see 5.2e Environmentally Sound Waste Management and Facilities for details).

Refuse transfer stations

Refuse transfer stations (RTSs) reduce the environmental impact of transporting waste to landfills. Small refuse collection vehicles (RCVs) deliver waste to the RTSs where it is transferred into bulk waste containers that are taken to landfills either by road or by sea. Each container can accommodate three to five RCV-loads. In 2004, about 1 100 RCV trips to landfills were eliminated each day.

Hong Kong has eight RTSs, located mostly in built-up areas. Ventilation and odour removal systems have been installed to reduce dust and odour from the exhaust air. The Island West RTS is located within a man-made cavern under Mount Davis, which reduces its visual impact and takes up less land space.



Island West Refuse Transfer Station.

Chemical Waste Treatment Centre (CWTC)

The CWTC has been operating on Tsing Yi Island since 1993. Stack gas from the incineration system is scrubbed and a spray dry absorber, activated carbon injection and fabric filter baghouses are used to remove pollutants prior to release into the atmosphere. The gas is monitored continuously to ensure complete combustion and removal of air pollutants. In the event of any problem, waste feed to the incinerator will be cut off automatically.

The ambient air around the CWTC is monitored twice yearly and a measurement of dioxins is carried out monthly. The results are lower than or comparable to levels observed in other large cities around the world. All process residues, including incineration ash, are chemically treated and confirmed by analysis to be stable before being taken to the SENT landfill for final disposal.

The contractor is allowed to keep revenue from the sale of materials recovered from waste, to encourage environmentally friendly practices. Oil recovered from oily wastewater is blended and used by ocean-going vessels as recovered fuel oil, while copper oxide recovered from waste etchant generated by the electronics industry is sent to overseas smelters to recover the copper. In 2004, 5 332 tonnes of oil and 493 tonnes of copper oxide were recovered by the CWTC.

ISO 14001 certification

Our Waste Facilities Business Unit has had ISO 14001 certification of its environmental management system (EMS) since 2000. This system aims to develop and promote a sustainable waste management strategy and to plan and provide for waste management facilities in Hong Kong. We have also persuaded our waste facility contractors to implement similar EMSs to further enhance their environmental performance. In 2004, ISO 14001 certification was achieved at Island East Transfer Station, the Island West Transfer Station and the West New Territories Landfill. This followed certification of all 12 restored landfills, the North West New Territories Transfer Station, the Sha Tin Transfer Station, the seven transfer facilities in the outlying islands, the North East New Territories Landfill and the Sha Ling Composting Plant.

Pollution Control in Laboratories

The EPD's laboratories (for air, water sciences and microbiology) are operated in a manner that minimises their impact on the environment. Regular maintenance and monitoring programmes are in place to ensure full compliance with legal requirements and statutory licence conditions. In 2004, our monitoring indicated full compliance for effluent discharges from sinks and emissions from fume cupboards.

Further details of pollution control in laboratories – covering legal measures, air pollution, water pollution, monitoring, hazardous waste, emergencies and audits – are provided below.

Legal measures
All necessary licences and permits under the law (e.g. Water Pollution Control Ordinance, Waste Disposal Ordinance) have been obtained and the stipulated conditions are strictly adhered to. The EPD encourages contractors to exceed the legal requirements wherever possible.

Air pollution
Emissions from fume cupboards and safety cabinets are properly treated as required to avoid excessive emissions to the atmosphere. Laboratories are installed with exhaust hoods which operate round the clock to dilute and extract any emissions of calibration gases (such as carbon monoxide, sulphur dioxide and nitrogen oxides) to roof level for discharge.

Water pollution
The EPD's laboratory sinks are fitted with buffer tanks to prevent the accidental discharge of unsuitable substances into the sewers. A sink used for handling asbestos is also fitted with a filter to remove asbestos from wastewater.

Monitoring
Emissions from fume cupboards and discharges from sinks are monitored regularly to ensure they comply with the required standards.

Hazardous waste
Chemical waste is properly treated and disposed of by the Chemical Waste Treatment Centre contractor. Biological waste is disinfected and disposed of in accordance with World Health Organisation guidelines. A licensed collector is engaged to deliver asbestos samples from the air laboratory to the Southeast New Territories landfill for disposal.

Emergencies
Emergency spill kits are provided in all EPD laboratories and staff are trained to deal with accidental spills. The general procedures for handling chemical spillage/leakage are documented in the laboratory environmental and safety manuals.

Audits
Environmental audits of EPD laboratories are carried out regularly by laboratory staff and supplemented with audits as required by the EPD's Environment, Safety and Health Unit.

Pollution Control at Other Facilities

Indoor air quality
The Government introduced an Indoor Air Quality Certification Scheme for Offices and Public Places in September 2003. The first premises to receive an Excellent Class IAQ Certificate was the EPD's Indoor Air Quality Information Centre, which renewed its certification in 2004. Another five EPD premises, including Southorn Centre, Revenue Tower, Tsuen Wan Government Offices, the Wanchai Environmental Resource Centre and the Fanling Environmental Resource Centre, renewed their Good Class IAQ Certificates in late December 2004 and early January 2005. Three other EPD premises – the Island West Refuse Transfer Station Administration Building, the Chemical Waste Treatment Centre Administration Building and our office at the Shatin Government Offices – received their first Good Class IAQ certification in 2004. The goal is to have all EPD premises certified and work is proceeding to certify the remaining sites.

Certificate No.

Indoor Air Quality Certificate
(Excellent Class)
室內空氣質素檢定證書（卓越級）

Valid period: 26 November 2004 to 25 November 2006

I hereby certify that the indoor air quality of the following location(s) has fully complied with the Excellent Class of the Indoor Air Quality Objectives.

Name of building: HKPC Building
Address: 78 Tat Chee Avenue, Kowloon, Hong Kong
Certified location(s): Indoor Air Quality Information Centre

Competent Examiner
Name: Raymond C.L. Fong
Organisation: Hong Kong Productivity Council
Signature:
Date of issue: 26 November 2004

Indoor Air Quality Certification Scheme for Offices and Public Places

Indoor Air Quality Information Centre

The IAQ Information Centre at the Hong Kong Productivity Council is one of six buildings / premises that have been certified with the "Excellent Class".

Field work

Only non-toxic dye is used to trace pollution sources, to minimise the environmental impacts of investigations. Field samples are sent to the EPD's laboratories for appropriate action. Safety guidelines are issued to all field staff who are trained in the handling of hazardous materials.

Emergency Response

The EPD has internal emergency response plans for its operations, in particular waste facilities and laboratories. At landfills, the plans cover predictable events such as the unavailability of certain landfills or RTSs due to power failure and road blockages arising from traffic accidents, congestion, chemical waste spills, etc. At the Chemical Waste Treatment Centre, six emergency drills were carried out in 2004. The EPD also requires the CWTC contractor to conduct at least one drill for marine incidents every year. No incidents were reported in EPD laboratories or other facilities in 2004.

6 Our Own Operations

6.3 Greener Office

Our Responsibilities

We aim to exercise the principle of Reduce, Reuse and Recycle in our consumption of materials and to make efficient use of natural resources and energy in all our operations.

We will avoid, reduce and control environmental pollution arising from our day-to-day working practices.

We require our contractors to adopt and implement sound environmental management systems and pollution control measures.

An Early Advocate of the Paper-less Office

The EPD has practiced paper saving measures for many years and reduced paper consumption by 24% since 1998. We have also met and exceeded the targets set in a circular from the Environment, Transport and Works Bureau to reduce photocopying paper consumption by an average of 2.5% a year, from fiscal year 2003/04 to 2006/07. In 2004 the department reduced paper consumption by 15.3%, consuming 13 085 reams of photocopy paper compared with 15 455 reams in 2003. This was achieved as a result of on-going saving initiatives and the following programmes:

- Extension of the e-submission and approval system for procurement of non-computer items costing $50,000 or below.
- Use of e-LAPS (Electronic Leave Application and Processing System) and new electronic workflow applications to process acting appointment applications.

Year	1998	1999	2000	2001	2002	2003	2004
Photocopying Paper (Reams)	17 411	16 211	16 300	15 736	15 548	15 455	13 085
A. % reduction vs 1998 figure	-	6.9%	6.4%	9.6%	10.7%	11.2%	24.8%
B. Total paper saved since 1998 (reams)	-	1 200	2 311	3 986	5 849	7 805	12 131

Reducing Energy Consumption

The Departmental Environment, Safety and Health Committee provides management level stewardship on energy conservation and efficiency. Energy consumption is a standing item to be reported and reviewed in Committee meetings. Our management system enables us to internalise a plan-do-check-act cycle to raise awareness and communicate with staff.

Extended working hours and the extensive use of information technology have created challenges in

reducing energy consumption. The EPD has introduced a number of measures to meet these challenges, and in 2004 consumption in our offices dropped 0.6% compared with 2003, to a total 2 667 398 kWh. New energy-saving measures introduced in 2004 included:

- Carrying out lighting audits in EPD offices to identify possible power saving opportunities and remove dispensable lighting tubes.
- Resetting the temperature in office air-conditioners to 25.5 degrees Celsius (in line with a 2004 circular request from the Environment, Transport and Works Bureau).
- Appointing Energy Wardens in branch offices to promote housekeeping measures to save energy.

The Hong Kong Awards For Energy Efficiency And Conservation In Government

The EPD participated in the "Hong Kong Awards For Energy Efficiency And Conservation In Government" launched by the Electrical and Mechanical Services Department in late 2003, with a view to achieving a greener office and reducing electricity bills. The competition ran throughout 2004, during which we conducted lighting audits that identified areas for improvement. In particular 523 dispensable fluorescent tubes were removed, resulting in an estimated annual saving of 25 000 kWh. The Environment, Safety and Health Unit also arranged experience sharing seminars, training and briefings to raise staff awareness.

Greener Transport

All EPD vehicles are powered by petrol or liquefied petroleum gas. We have adopted a non-idling policy and are combining trips to reduce air emissions and fuel consumption. In 2004, two vehicles were returned to the Government Logistics Department. The departmental fleet comprised 54 vehicles.

Improving the Office Environment with Good Indoor Air Quality

Good Indoor Air Quality (IAQ) creates healthy working conditions for staff and provides a pleasant environment for customers and clients. The EPD participates in the voluntary IAQ Certification Scheme for offices or public places. By the end of 2004 nine EPD premises had been awarded/renewed Good Class IAQ Certificates or above. Details are available in 6.2 Minimising the Impacts of Our Operations.

6 Our Own Operations

6.4 Staff Awareness, Training and Participation

Our Responsibilities

We will ensure through appropriate training and professional development, that every member of our staff has the knowledge and competency to assume their environmental responsibilities and to participate constructively in environmental activities.

We will ensure that all our staff are aware of our Environmental Policy, that they will be able to provide detailed information about our Policy and our initiatives to our stakeholders on their particular areas of concern.

Staff Training and Development

The EPD's Human Resources Unit (HRU) is responsible for the training and development of staff. In 2004, HRU and the departmental groups organised 30 continuous professional development courses on various environmental subjects for about 400 colleagues, and four environmental management sessions on ISO14001. The HRU also co-ordinated four local environmental conferences for 200 professional staff, and collaborated with the Hong Kong Polytechnic University on vocational workshops on noise, air and water monitoring and landfill management for 285 Inspector Grade staff. Two experience-sharing workshops were organised for senior professionals and directorate-level staff in the department on landfill extension, effluent reuse, sewage treatment, major infrastructure developments and cross-border projects. EPD professional staff received training for an average of 7 days each in 2004. Technical staff recorded an average of 6 days training each.

Raising Staff Awareness

Staff are encouraged to participate in various environmental schemes in the workplace. We collect and reuse office recyclables, such as spent toner cartridges and used plastic stationery. Energy Wardens have been appointed in each branch office to strengthen energy saving practices. In 2004, we participated in the Hong Kong Awards for Energy Efficiency and Conservation in Government Premises and the Environment, Transport and Works Bureau's Used CD Recycling Programme, to further encourage staff participation in these areas.

Outside the workplace, the EPD undertakes to raise environmental awareness among staff and their families through various outings. In 2004 we arranged guided tours to Ping Shan Heritage Trail, Ocean Park, Tsim Bei Tsui Eco Tour and the Waste Separation Pilot Facility at Island East Transfer Station.

Our colleagues are also encouraged to contribute green ideas through the Departmental Staff Suggestion Scheme and useful proposals are honoured with awards.

7 Progress on Year 2004 Targets

Major Initiatives under EPD's programme :

Reporting Area	Long term objective	Targets for 2004	Progress in 2004	Reason(s) for slippage, if applicable
Contribution to Strategic Decision-making	To provide long term support to bureaux and departments, who since 2000 have been required to publish annual Environmental Performance Reports (EPRs), as well as reporting guidebooks and benchmark tools for preparing the EPR.	• To launch a CEM Cyber Helpdesk for EPRs in 2004 to help all government bureaux / departments to prepare and improve the quality of their reports.	• Launched a CEM Cyber Helpdesk for EPR in August to help government bureaux / departments to prepare and improve the quality of their reports.	N.A
	To explore and develop measures to assist small and medium enterprises (SMEs) in the construction and electrical / electronic sectors to understand the local and global environmental pressures from various stakeholders and stay competitive in the environmentally conscious world business market; and to facilitate these sectors in adopting and implementing the ISO 14001 Environmental Management System (EMS).	• To complete a study to consolidate environmental management information with ISO 14001 EMS support packages for the SMEs in the construction and electrical / electronic sectors in Hong Kong.	• Completed a study on ISO 14001 EMS for SMEs in the construction and electrical / electronic sectors in November. • Organised a seminar and launched a support package on Environmental Management Information and ISO 14001 EMS for SMEs in the construction sector in December.	N.A
		• To continue promoting Strategic Environmental Assessment (SEA) in the region and take into account views from practitioners' on the interim SEA Manual published in 2003.	• Views were taken into account and the Manual was finalised in November. It was introduced during the 1st China International Forum on Environmental Impact Assessment at BoAo, China held on 13-15 December, and uploaded to EPD's SEA webpages in pdf and html formats for easy access by the public.	N.A
Prevention and Mitigation through Environmental Impact Assessment		• To organise a launching seminar for Continuous Public Involvement (CPI) to promote the importance of CPI to various stakeholders.	• A seminar on CPI held in May attracted more than 200 participants.	N.A

		• To launch a web-based e-learning platform for the public to better understand the EIA mechanism.	• A web-based e-learning platform was launched on the EIAO website.	N.A
Better Air Quality	To make the retrofit requirement mandatory.	• To complete the retrofit programme for pre-Euro standard diesel vehicles over 4 tonnes.	• Installation completed, except for those diesel vehicles that undertake long idling duties.	N.A
	To increase public awareness about good indoor air quality, and thereby achieve and maintain better indoor air quality.	• To continue the promotion of good indoor air quality (IAQ) and review what improvements should be made.	• By the end of 2004, six sites had achieved "Excellent Class" and 46 sites "Good Class" under the IAQ Certification Scheme for Offices and Public Places. The scheme has been taking applications since September 2003. • Several measures were taken to promote and encourage active participation in the Certification Scheme. In 2004 three experience-sharing seminars were organised, attended by 500 participants from the relevant trades. The EPD also explained the Certification Scheme at eight seminars organised by government departments and local and overseas professional bodies. • The department is also reviewing the framework for quality assurance under the Certification Scheme.	N.A
	To establish and operate a regional joint air quality monitoring network for the Pearl River Delta (PRD) region. To understand the regional air pollution situation. To ensure the comparability of data in the PRD region.	• To put into operation a joint air quality monitoring network in the PRD region.	• The regional joint air quality monitoring network for the PRD region has been set up and will start operating in 2005. • Standard operating procedures for quality control and assurance in the joint air quality monitoring network have been drafted with Guangdong officials. • Inter-laboratory comparisons with our Guangdong counterparts have been completed.	N.A
	To harmonise the working criteria, skills and experience in the PRD region air monitoring network.	• To conduct technical exchanges with Guangdong on air quality monitoring.	• Technical exchanges on data processing, field operations, standard certification and audits have been carried out.	N.A
Quieter Environment	To prevent and minimise environmental	• To review 180 planning schemes and strategic	• Reviewed 146 planning schemes and strategic	N.A

	noise through early intervention in the planning process.	proposals to minimise noise problems for about 41 000 people.	proposals to benefit 32 000 people.	
	To resolve road traffic noise issues through implementation of abatement measures.	• To continue supporting investigation studies/design work for retrofitting barriers in the retrofitting programme, and the engineering feasibility studies and work for resurfacing identified road sections.	• Supported investigation studies/ design work/ engineering feasibility studies for retrofitting barrier projects and the work for resurfacing the identified road sections.	N.A
	To minimise environmental noise problems through enforcement of the Noise Control Ordinance.	• To put into operation the new provision of the Noise Control Ordinance to hold directors of body corporate liable for noise offences by their companies.	• Completed. The new provision of the Noise Control Ordinance has been put into operation.	N.A
	To raise public awareness on environmental noise and encourage public involvement.	• To develop an interactive system for enhancing the public's appreciation of noise levels from different sources.	• Completed.	N.A
Better Water Quality	To monitor the biological responses of indicator species with respect to changes in water quality and to assess the effects of pollutants on the ecological health of the marine environment.	• To implement by phases a bioindicator monitoring programme for tracking the effects of pollutants on the ecological health of the marine environment in Hong Kong.	• A bio-indicator monitoring programme was initiated, which includes bio-indicators at various biological organisation levels. A programme examining community indicators will be initiated in 2006.	N.A
	To monitor the marine environment (water, sediment and biota) for chemicals of potential concern as well as priority toxic substances which are controlled internationally.	• To prepare and initiate a programme for monitoring toxic substances in Hong Kong's marine environment.	• A toxic substances monitoring programme was initiated. Field sampling was conducted in mid 2004 and the laboratory analyses are expected to be completed by early 2005.	N.A
	To restore Deep Bay to a clean and healthy state by year 2015.	• To work out an agreed plan with the Shenzhen Authority to conduct the first review of the Deep Bay Water Pollution Control Joint Implementation Programme for improving the water quality of Deep Bay.	• The Mirs Bay and Deep Bay Areas Environmental Management Special Panel met in September and endorsed a detailed work plan and agreed on membership of the joint study management team for the first review of the Deep Bay Water Pollution Control Joint Implementation Programme. The review study commenced in October.	N.A
	To address water pollution and nuisance problems from stormwater drains and	• To complete an in-house investigation on stormwater pollution in Mong Kok in early	• The in-house investigation on stormwater pollution for Mong Kok was	The planned study on urban stormwater

improve the environment of waterfront areas in Victoria Harbour.	2004. To commence a planned study on urban stormwater pollution for West Kowloon subject to decision by our bureau.	completed in March . The data and findings supported the case for follow up work to tackle the issue. This is now being considered at policy bureau level.	pollution in West Kowloon was deferred to allow time for comprehensive consideration of the results of the Mong Kok study.
To demonstrate the feasibility of reclaimed water uses and facilitate a policy decision on the way forward for territory-wide application.	• To initiate preparatory work for an effluent re-use demonstration scheme in North District subject to decision by our bureau.	• The scope and programme of the Demonstration Scheme was agreed by the Bureau, DSD and WSD. Preparatory work for commencement of design and construction is under way.	N.A
To establish the priorities and scope of the remaining sewerage projects, so as to best utilise the limited public funds for improving the environment and public sanitation.	• To support the policy bureau in the review of the priorities and scope of recommended projects in the sewerage programme.	• Liaison with the Bureau continued throughout the year and a considerable number of priority projects were funded in 2004.	N.A
To implement the high priority recommendations under the various sewerage master plan reviews, in consultation with DSD.	• To pursue the high priority recommendations with DSD.	• Ongoing discussions were held with DSD to follow up on local improvement measures, as well as early implementation of priority sewerage works through CWRF Block Vote bids.	N.A
To establish standardised methodologies, procedures and requirements of sewerage impact assessments for all planning areas of Hong Kong.	• To issue updated guidelines for sewerage planning and the carrying out of sewerage impact assessment by project proponents.	• Proposals for revising the Guidelines of Estimating Sewage Flows were issued to DSD in July. The revised Guidelines are being finalised for issue in January 2005. The guidelines will be adopted for internal use in EPD before further promulgation.	The slight slippage was due to an expanded scope for data analysis and investigation to take account of DSD's comments.
To implement HATS Stage 2 in a timely manner, with a view to improving the harbour water quality and sustaining it in the long term.	• To complete community consultation on the trials and studies for the Harbour Area Treatment Scheme (HATS), and identify the way forward for implementing HATS.	• Consultation was completed in November.	N.A
To introduce the new effluent standards into the Legislative Council for negative vetting.	• To introduce the new effluent standards into the Legislative Council for negative vetting subject to decision by our policy bureau.	• The effluent standards that were established in a review conducted several years ago, were re-visited at the request of the bureau.	New scientific information became available during the HATS Environmental and Engineering Feasibility

				Study concluded in 2004.
Environmentally - Sound Waste Management and Facilities	To provide economic incentives for waste producers to reduce and recycle construction waste, in order to conserve precious landfill space.	• To implement the construction waste charging scheme by 2005 upon passage of the Bill by the Legislative Council in 2004.	• LegCo passed the Waste Disposal (Amendment) (No.2) Bill 2003 on 2 July. The Waste Disposal (Charges for Disposal of Construction Waste) Regulation & Waste Disposal (Designated Waste Disposal Facilities) (Amendment) Regulation 2004, setting out details of the charging scheme, were tabled in LegCo for vetting in November. A Subcommittee was formed to study these Regulations.	The slight slippage was due to the need to wait for a slot in LegCo to vet the Bill, as well as the longer vetting period taken by LegCo to address the trades' concerns and to examine the charging scheme.
	To explore ways to develop the restored landfills for beneficial uses.	• To commission the Sai Tso Wan Recreation Ground in March/April 2004.	• Completed.	N.A
	To develop a long-term sustainable waste management strategy for Hong Kong.	• To produce the second draft Waste Management Plan by incorporating results of the Expressions of Interest exercise and Design-Build-Operate Review.	• Work progressed on the EOI exercise. An evaluation of technology options was completed and a public consultation is planned for 2005.	The programme of the EOI public consultation slipped because of policy considerations (it was deemed better to consult the public in 2005 instead of the end of 2004).
	To maintain adequate landfill capacity for the final disposal of wastes.	• To commission feasibility studies on extension schemes for the three strategic landfills.	• Scopes of the studies were finalised after extensive communication with the key stakeholders.	Extensive public communication initiatives were undertaken in drawing up the scopes of the studies.
	To encourage and facilitate maximum beneficial use of landfill gas.	• To finalise the landfill gas selling arrangement for the North East New Territories Landfill.	• Completed.	N.A
	To explore environmentally sound recycling outlets for used computers and electrical appliances, and to examine the financial and operational requirements for running a long-term recycling programme.	• To complete a pilot scheme to recover 22 000 used computers and electrical and electronic equipment for reuse and recycling by December.	• About 41 000 units of used computer and electrical and electronic equipment were recovered for reuse or recycling.	N.A
	To establish the Eco Park (previously known	• To submit the EIA and land-use rezoning	• Work was in progress, with the EIA and land	Additional time was

as Recovery Park) for the provision of long-term land and infrastructure to support the development of the recycling industry in Hong Kong.	reports under the EIAO and Town Planning Ordinance for the Eco Park project by the third quarter of 2004.	use rezoning reports to be completed in early 2005.	required to deal with the technical complexities of the Air Quality Impact Assessment.
To identify the most suitable option for implementing product responsibility schemes for tyres and batteries in Hong Kong.	• To complete a regulatory impact assessment to assess the costs and benefits of employing product responsibility schemes to manage waste tyres and batteries by the second quarter of 2004.	• The draft final regulatory impact assessment report was submitted by the consultants.	Many views and suggestions were offered by the stakeholders and the consultants required more time to incorporate them in the assessment.
To characterise food waste in Hong Kong and promote on-site waste treatment.	• To commence in February and complete by the first quarter of 2005 a study on food waste management.	• Food wastes of 37 major sources were characterised and 2 food waste generators expressed interest in on-site waste treatment.	N.A
To promote the development of the local waste tyre recycling industry.	• To continue the pilot scheme to recycle waste tyres.	• About 2 400 tonnes of waste tyres, which would have been disposed of at landfills, were recovered and turned into useful materials. This saved landfill space as well as the cost of transporting the tyres to landfills.	N.A
To develop integrated waste management facilities in Hong Kong to reduce the environmental burden and landfill space required for waste disposal.	• To evaluate waste management technology options and to consult the public on the technology options for development of integrated waste management facilities.	• An evaluation of waste management technologies options was completed in 2004. A public consultation on the options is scheduled in the first half of 2005.	The public consultation programme was revised to tie in with the overall policy development.
To implement legal control of the generation, collection and disposal of clinical waste in 2007.	• To proceed with the legislative programme for the control of the disposal of clinical waste.	• The Waste Disposal (Amendment) Bill for the control of clinical waste was submitted to the Legislative Council in June 2003.	Due to the large number of Bills submitted in the 2003/04 legislative year, LegCo did not have time to scrutinise the Bill. It will be re-introduced to LegCo in 2004/05.
To implement the use of new risk-based standards for contaminated land management after thorough consultation with the stakeholders.	• To start consultation with stakeholders on the draft Risk Based Remediation Goals for contaminated land management.	• A draft consultation paper was prepared. The Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management and the associated Background Document were also revised.	More time is required for discussion with the bureau on the technical details related to the Risk-based Remediation Goals and for endorsement of the consultation

				document.
Effective Enforcement and Emergency Response	To promote the wider use of environmentally friendly / quality construction equipment and technology in construction work so as to minimise any nuisance created.	• To set up a system and collate information on up-to-date powered mechanical equipment to assist the construction trade in preparing Construction Noise Permit applications.	• The consultation process has been started and comments and support from HKCA sought in August. • HKCA were briefed on our proposal in the same month and HKCA is in support of our proposal. • 3 public briefings / workshops were arranged for the trade in October to solicit views on the proposal and the implementation details.	N.A
	To integrate the GIS-based complaint database system with the integrated enforcement database (being developed and expected to be completed in 2006) to further enhance the response to pollution complaints and facilitate investigation work.	• To develop and implement web-based application of the GIS-based database system, to enhance the response to pollution complaints.	• The web-based application of the GIS-based database system has been fully implemented from October.	N.A
	To apply a mobile computing solution as far as possible in all enforcement activities, with the long term objectives of: • removing as far as possible the need to input data manually into the back-end database system; • enhancing the data communication process with built-in integrity checking/verifications; • enabling off-site communication, including e-mail and online data / information transfer, for *ad hoc* or emergency investigation.	• To develop and implement a mobile computing solution for routine enforcement work.	• The System Analysis & Design stage of the project was completed. • The Physical Design of the system is in progress. • Some polluter mapping exercises are being done in house to prepare a master file of the Integrated Enforcement index for waste and water activities. • PDA forms / checklists, together with an e-Form Generation Engine, are being developed.	N.A
	To provide a common integrated electronic platform for the day-to-day management of enforcement information of all sorts (i.e. all media and activities), with the long term objectives of: • minimising or avoiding duplicated data handling; • facilitating data sharing and communication among different media activities; and	• To develop and implement an integrated database solution for streamlining multi-media enforcement workflow and data management.	• The system is now being developed and expected to be completed by early 2006. • The project commenced in May and is now at the system design stage for working out the technical option and business solutions. • A working paper on the Current Environment Description of the	N.A

	• allowing modelling of any types to achieve better decision making and strategic planning.		various business processes and work flow was completed. • Focus Group discussion and meetings are being conducted to collect user requirements for the project.	
Building Partnerships and Customer Service	To raise the operational practice of all existing clinical waste collectors to the standard of the future regulatory control.	• To continuously raise the operational standard of all existing clinical waste collectors in 2004 to the level required in the upcoming regulatory control.	• Performance audit was carried out and professional advice given to existing collectors on improvement areas identified in the audit. • Training courses on safe handling of clinical waste were carried out jointly with the Occupational Health and Safety Council.	N.A
		• To continue reaching out proactively to private and public sector proponents, contractors, consultants and professional bodies in order to enhance their understanding of the EIA Mechanism. To further collaborate with professional bodies to reach out to professionals in the private sector.	• To promote the concept of Continuous Public Inovlvement, two joint seminars were organized in May and June with more than 450 participants from the private and public sectors. • The EIAO Support Section held 13 EIA Training and Capacity Building Workshops for 430 participants from varioius sectors. An e-learning platform on the EIA mechanism was launched in March on the EPD website for easy public access.	N.A
		• To distribute the Training Manual on the EIA mechanism to promote dialogue.	• The Training Manual on the EIA mechanism was distributed to relevant stakeholders.	N.A
	To promote environmental compliance and awareness in the vehicle repair trade and advocate green management practices.	• To co-organise the "Green Garage Election" with the vehicle repair trade to recognise environmentally responsible vehicle repair workshops and promote further improvement in environmental compliance.	• The "Green Garage Election 2004" was held in early 2004 with the Hong Kong Vehicle Repair Merchants Association Ltd. and the Environmental Vehicle Repairers Association Ltd. • As part of the election campaign, apprentices at a technical institute were invited to design a logo for the "Green Garage Election 2004" to help promote green garage practices. • An award presentation ceremony with game booths was held at East Point City in May to spread the green garage message to the public.	N.A
	To provide an electronic transaction platform for the public to access	• To launch the licensing module of the Environmental	• The licensing module of EPIC was launched by phases, with the first	N.A

	specific environmental information interactively, submit applications, settle payment and receive licences electronically.	Protection Interactive Centre (EPIC) in promoting e-services and on-line fee payment for licence application.	3 Noise Emission Labels functions available internally in 2004. • Enhancement of the back-end license processing module was started and completed in 2004, to improve the applicability of the system. • It is anticipated that the remaining licensing functions will be available by mid-2005.	
Environmental Awareness and Education	To encourage all public and private housing estates to participate in waste recycling and achieve an increased recovery rate.	• To implement Phase VIII of the Waste Recycling Campaign in Housing Estates in 2004 to recruit 40-60 more housing estates to participate.	• 1 420 housing estates joined the Waste Recycling Campaign in Housing Estates (Phase VIII) which was launched in April. • A pilot programme on "Source Separation of Waste" was launched to collect a wide range of recyclables on each floor of apartment blocks.	N.A
	To extend the Student Environmental Protection Ambassador Scheme by including members of youth groups and offering comprehensive training programmes.	• To invite 750 schools and 12 000 students to join the Student Environmental Protection Ambassador Scheme in 2004.	• 750 schools and about 12 000 students joined the Student Environmental Protection Ambassador Scheme in 2004.	N.A
	To empower teachers, through the train-the-trainer programme, with the capacity to train Student Environmental Protection Ambassadors.	• To conduct 14 environmental education training workshops for 420 teachers in 2004.	• 17 environmental education training workshops were held for about 800 teachers in 2004.	N.A
	To reach out to every sector of the community and bring the latest environmental information to the public.	• To arrange 110 community visits by the Mobile Environmental Resource Centre in 2004.	• 114 community visits by the Mobile Environmental Resource Centre were conducted in 2004.	N.A
		• To organise 50 environmental awareness training sessions for civil servants in 2004.	• 50 environmental awareness training sessions were organised in 2004.	N.A
	To widen and fortify the green network in the community by setting up the Green Desks.	• To arrange 120 community outreach visits by the EPD's Green Desk in 2004.	• 123 community outreach visits by the Green Desks were arranged in 2004.	N.A

Initiatives to Strengthen the Environmental Performance of Our Internal Operations:

Reporting Area	Long term objective	Targets for 2004	Progress in 2004	Reason(s) for slippage, if applicable
Corporate Environmental Management	To pursue continual improvement in our environmental performance by implementing an effective management system.	• To monitor the potential significant environmental aspects of EPD's internal activities as identified in the 2003 review.	• Monitoring kept up. • Progress in paper and energy savings is reported in "Greener Office"	N.A
Minimising the Impacts of Our Operations	To ensure wastes treated / disposed of at our facilities are managed in the most environmentally acceptable manner.	• To continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.	• On going. Achieved full compliance with legal requirements and 99.983% compliance with contractual environmental requirements.	N.A
	To exercise operational control to avoid and reduce pollution arising from our services	• To achieve full compliance with legal and departmental environmental requirements in our labouratories and field operations.	• Achieved full compliance.	N.A
Greener Office	To demonstrate efficiency and commitment to environmental conservation.	• To further extend the e-request arrangement to purchase of all consumable items costing less than $50,000 and phase out hard copy submissions.	• Launched mandatory application of the e-request for procurement of consumable items less than $50,000.	N.A
	To contribute to the reduction of expenditure and reduce resources consumption.	• To actively implement new paper saving initiatives identified in 2003 to catch up with the government-wide voluntary target for saving paper. • To implement further energy saving measures in conjunction with energy audit.	• Achieved 2.5% reduction target in 2003/04 financial year. • Established a paper ordering plan. Groups were required to follow the corresponding consumption targets. • Appointed Energy Wardens to remind staff of housekeeping measures for saving energy. • Conducted energy audits in eight EPD offices. Department-wide electricity consumption was reduced by about 0.6 % from 2 682 561 KWh in 2003 to 2 667 398 KWh in 2004.	N.A
		• To further pursue green transport arrangements and reduce reliance on Government vehicles.	• 2 vehicles were returned to the Government Logistics Department. The departmental fleet was reduced to 54 vehicles.	
		• To conduct IAQ tests and obtain IAQ Certificates for all EPD	• By 2004, EPD had one premise certified Excellent Class, and	

		offices by phases to ensure a healthy working environment for all staff.	eight premises certified Good Class in the IAQ Certification Scheme.
Staff Awareness, Training and Participation	To promote staff environmental awareness and encourage participation in environmental protection activities	• To organise workshops / seminars and awareness campaigns for staff.	• 62 staff attended seminars/briefings on environmental management related courses.
		• To promote staff participation and contributions to complement government-wide waste reduction and other green initiatives.	• Participated in the Hong Kong Awards for Energy Efficiency and Conservation in Government to raise staff awareness of energy saving.

8 Targets for 2005

Major Initiatives under EPD's programme:

Reporting Area	Long term objective	Targets for 2005
Contribution to Strategic Decision-making	A long term effort to explore and develop ways and means to assist and facilitate SMEs in the E&E Sector to understand the local and global environmental pressure from different stakeholders and stay competitive in the environmentally conscious world business market, and to facilitate these sectors in implementing and adopting the ISO 14001 EMS.	• Organise a seminar and launch a support package on Environmental Management Information and ISO 14001 Environmental Management System (EMS) for SMEs in the Electrical/Electronic (E&E) Sector.
	Continue the effort to promote SEA locally and internationally. Enable and engage the public by providing them with easy access to the SEA Manual and related information.	• To enhance the electronic version of the SEA Manual now being posted on the EPD website, aiming to provide linkages to various SEAs and environmental information. • The current SEA webpages posting SEA materials will be revamped to make them more user-friendly, interactive and appealing. • The SEA Manual will continue to be introduced to local and overseas government officials and professionals on such occasions as forums and workshops to promote SEA.
Prevention and Mitigation through Environmental Impact Assessment		• To launch an improved version of the demo 3-D EIA project on the website to illustrate its application and how the public could more easily visualise and understand the key EIA findings.
Better Air Quality	To collect air quality data in the region to support the Regional Air Quality Management Plan in developing control strategies and assessing the impact of these strategies.	• To put into operation a joint air quality monitoring network in the PRD region.
	To ensure the quality of ambient ozone monitoring in the PRD region and elsewhere in Mainland China.	• Regional Ozone Calibration Service - To provide a calibration service to other ozone monitoring authorities in the region.
	To support quality assurance in the ambient air quality monitoring network in the region.	• Performance Comparison - To compare the data quality of the three Guangdong ambient air monitoring stations with the Hong Kong stations.
	To comply with the requirements of the Beijing Amendment to the Montreal Protocol.	• To complete the retrofit programme for long-idling pre-Euro standard diesel vehicles over 4 tonnes. • To introduce to the Legislative Council legislation to tighten emission standards for newly registered vehicles to Euro 4 standards, in step with the European Union.

		• To introduce to the Legislative Council legislation to require all pre-Euro standard vehicles over 4 tonnes to be installed with emission reduction devices. • To continue the promotion of good indoor air quality (IAQ) and review what improvements should be made, such as developing a quality assurance system for indoor air quality certification works. • To conduct technical exchanges with Guangdong on various issues in air quality management and monitoring. • To draft a regulation with respect to the contents of volatile organic compounds in paint, printing inks and selected consumer products. • To implement a regulation requiring petrol filling stations to install and operate vapour recovery systems for vehicle refuelling.
Quieter Environment	To prevent and minimise environmental noise through early intervention in the planning process.	• To review 140 planning schemes and strategic proposals to minimise noise problems for about 32 000 people.
	To resolve road traffic noise issues through implementation of abatement measures.	• To continue supporting reviews / investigation studies / design work for retrofitting barriers for PWP Category A, B and C projects of the retrofitting programme, the technical feasibility studies for other retrofit projects and the work for resurfacing identified road sections.
Better Water Quality	To fulfil the HKSAR's obligations under the Stockholm Convention.	• To compile a POPs inventory for Hong Kong and draft the Hong Kong Implementation Plan as part of China's National Implementation Plan for submission to the Stockholm Convention Secretariat via China's State Environmental Protection Administration.
	To restore Deep Bay to a clean and healthy state by year 2015.	• To complete water pollution surveys for the Yuen Long, Kam Tin, Tin Shui Wai, Ngau Tam Mei and San Tin catchments under the first review of the Deep Bay Water Pollution Control Joint Implementation Programme.
	To introduce the new effluent standards into the Legislative Council for negative vetting.	• To re-visit some of the effluent standards established in a review conducted on the Technical Memorandum for Effluent Standards several years ago, upon request of the bureau.
	To implement legal control of the generation, collection and disposal of clinical waste in 2007.	• To re-introduce the Waste Disposal (Amendment) Bill for the control of clinical waste to the Legislative Council
	To develop experience in Total Water Management and control the demands on the sewerage system.	• To complete the design and tender process for the Demonstration Scheme on Reclaimed Water Uses in the North District in 2005.
	To implement HATS Stage 2 in a timely manner, with a view to improving the harbour water quality and sustaining the improvement in the long term.	• To identify the way forward for HATS, based on views collected in the consultation in 2004, and the Chief Executive's 2005 Environmental Policy

		Agenda.
Environmentally -Sound Waste Management and Facilities	To develop integrated waste management facilities in Hong Kong to reduce the environmental burden and landfill space requirement arising from waste disposal.	• To consult the public on technology options for the development of integrated waste management facilities in Hong Kong.
	To achieve full recovery of the variable operation cost of collecting and treating chemical waste and MARPOL waste at the Chemical Waste Treatment Facilities (CWTC).	• To revise charges for the disposal of chemical waste and MARPOL waste at the CWTC.
	To provide an economic incentive to waste generators to reduce and recycle construction waste to conserve precious landfill void space.	• To implement the construction waste charging scheme at landfills in the latter part of 2005.
	To promote further development of the local waste tyres recycling industry.	• To replace the pilot scheme on waste tyres recycling with a longer term programme to be commissioned in the second half of 2005.
	To explore environmentally sound recycling outlets for used computers and electrical appliances, and to examine the financial and operational requirements for running a long-term recycling programme.	• To continue the pilot programmes to recover used computers and electrical and electronic equipment for reuse and recycling.
	To divert rechargeable batteries away from landfills for recycling.	• To launch the Rechargeable Battery Recycling Programme in the first half of 2005.
	To establish the Eco Park (previously known as Recovery Park) for the provision of long-term land and infrastructure to support the development of the recycling industry in Hong Kong.	• To invite tenders for construction of the Eco Park in Tuen Mun Area 38.
	To implement source separation of domestic waste on a territory-wide basis.	• To promote source separation of domestic waste territory-wide in partnership with property management associations and companies.
	To maintain adequate landfill capacity for the final disposal of wastes.	• To commission feasibility studies on extension schemes for the three Strategic landfills.
	To maintain a sufficient waste transfer service on Hong Kong Island.	• To commission a study for the follow-on operation of Island East Transfer Station.
	To develop a grease trap waste treatment facility in the urban area to replace the interim facility currently operating at the WENT Landfill.	• To review the feasibility of the development of a grease trap waste treatment facility in the urban area.
Effective Enforcement and Emergency Response	Dumping operations can be monitored remotely and instantly to better protect the marine environment from short-dumping of dredged sediments. Dumping permit holders will comply more proactively with the Dumping at Sea Ordinance.	• To set up a real time monitoring control room in the EPD to enhance control of dumping at sea activities by barges, under the Dumping at Sea Ordinance.
	To apply a mobile computing solution as far as possible in all enforcement activities, with the long term objectives of: • removing the need to input the data manually into the back-end database system; • enhancing the data communication	• To implement in phases a mobile computing solution for field enforcement activities.

	process with built-in integrity checking / verifications; and • enabling off-site communication, including E-mail and online data / information transfer, for *ad hoc* or emergency investigation.	
	To provide a common integrated electronic platform for the day-to-day management of enforcement information of all sorts (i.e. all media and activities), with the long term objectives of: • minimising or avoiding duplicated data handling; • facilitating data sharing and communication among different media activities; and • allowing modelling of any types to achieve better decision making and strategic planning.	• To continue the development of an integrated data / information management solution for streamlining multimedia enforcement workflow and data management.
Building Partnerships and Customer Service	To adequately protect the Pearl River as a valuable water resource for achieving sustainable development of the region.	• To participate in the compilation of a water pollution prevention plan for the Pearl River catchment as part of the Pan-PRD Regional Environmental Protection Co-operation.
	To provide a dedicated advisory service to the business community.	• To set up a Help Desk telephone hotline service for the trades under the partnership programmes, which will provide a one-stop source of information to the business community, give advice on environmental legislation and standards, and provide practical reference guides on complying with the requirements.
	As an integral part of the partnership programme, to promote environmental compliance and go beyond compliance by introducing new control technologies and good management practices to the trades and related stakeholders.	• To identify and promote wider application of environmentally friendly technologies and materials.
Environmental Awareness and Education	To encourage all public and private housing estates to participate waste recycling and achieve an increased recovery rate.	• To implement the Programme on Source Separation of Waste in 2005 to recruit 180 housing estates to participate.
	To extend the Student Environmental Protection Ambassador Scheme by including members of youth groups, and offering more comprehensive training programmes.	• To invite 750 schools and 14 000 students to join the Student Environmental Protection Ambassador Scheme in 2005.
	To empower teachers, through the train-the-trainer programme, with the capacity for training up Student Environmental Protection Ambassadors.	• To conduct 14 environmental education training workshops for 420 teachers in 2005.
	To reach out to every sector of the community bringing the latest environmental information to the public.	• To arrange 110 community visits by the Mobile Environmental Resource Centre in 2005.
	To widen and fortify the green network in the community by setting up the Green Desk.	• To arrange 120 community outreach visits by the Green Desk in 2005.
Corporate Environmental Management	To pursue continual improvement in the environmental performance of our internal operations by implementing an effective management system.	• Continue to monitor the potentially significant environmental aspects of EPD's internal activities.

		• Continue paper saving initiatives to meet the 2.5% reduction target. • Continue energy saving measures in conjunction with the energy audit.
Minimising the Impacts of Our Operations	To ensure wastes treated / disposed of at our facilities are managed in the most environmentally acceptable manner.	• To continue close supervision of our waste facilities contractors, aiming at full compliance with both legal and contractual environmental requirements.
Greener Office	To demonstrate efficiency and a commitment to environmental conservation.	• To keep up the paper ordering plan and monitor the use of paper vis-à-vis the reduction targets.
	To contribute to the reduction of expenditure and reduce resources consumption.	• To continue audits in offices to look for energy saving opportunities.
		• To continue IAQ Certification work and arrange renewal as necessary.
Staff Awareness, Training and Participation	To promote staff environmental awareness and encourage participation.	• To arrange training sessions / seminars and awareness campaigns for staff.

9 Verification Statement

Objectives

Hong Kong Productivity Council
香港生產力促進局

Hong Kong Productivity Council (HKPC) was commissioned by the Environmental Protection Department (EPD) to verify its Environmental Performance Report 2005 (the "EPR 2005"), which covers EPD's environmental performance in 2004. The objectives of HKPC's verification work are to:

- Assess whether the scope of the EPR 2005 covers all significant issues in relation to EPD's environmental performance;
- Assess whether the selected statements and data presented in the EPR 2005 are accurate;
- Assess whether the data collection and information management systems used to prepare the EPR 2005 are reliable; and
- Provide recommendations for future reports.

Approach

Our verification procedures comprised a review of the EPR 2005, and selection of a representative sample of statements and data for interviews with representatives from EPD. During the interviews, the documented supporting materials relating to the selected statements and data as well as EPD's management practices and environmental initiatives were explained to and examined by our independent verifiers.

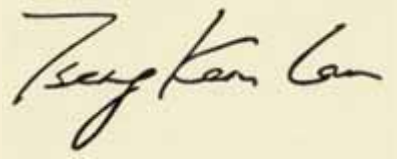
Results

Completeness
The EPR 2005 is considered to be comprehensive and provides an overview of EPD's environmental performance with respect to its activities, environmental issues, commitments and achievements. The EPR 2005 puts forth a summary of EPD's 2004 targets and progress, and future targets for year-on-year comparison of performance.

Accuracy and Reliability
The selected statements and data are consistent with the materials examined by HKPC during the verification process and reflect an accurate account of EPD's environmental management practices and performance. EPD has made amendments to specific statements for clarification, to HKPC's satisfaction. The data collection and information management systems used are considered to be both effective and reliable.

Recommendations for Future Reports
EPD is commended for completing the EPR 2005 as one of the communication channels to inform the public of its environmental commitments and continual effort on improving its environmental performance. EPD is encouraged to consider the following recommendations in preparing future reports:

- To further enhance readers' interest through focusing on the key and significant achievements of the Department in the report;
- To further increase the provisions of its environmental achievements/targets and quantitative performance as far as practicable to facilitate the continual review of EPD's improvement progress from year to year;
- To further encourage stakeholders' feedback through different channels to achieve continued improvements on both reporting and environmental performance; and
- To move towards sustainability reporting by including information on social and economic aspects with reference to the leading reporting best practices, in particular the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines in future reports, while it is noted in the Foreword that EPD has taken note of the Guidelines in preparing the report.



K L Tsang
Technology Services Manager
Environmental Management Division
Hong Kong Productivity Council
28th June 2005

10 Feedback Form

We welcome your valuable feedback on the Environmental Protection Department's Environmental Performance Report 2005 (the Report), to help us make improvements in the coming year. Please complete this form and either send it by clicking the "Submit" button below, or post it to the Knowledge Management Unit, Environmental Protection Department, Room 4020, 40/F., Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong or fax to 2511 5420. You may also send any comments by email to: enquiry@epd.gov.hk. Thank you.

1. How did you come to know about the Report?

2. Did you find the Report informative?

3. Did you find the information presented in an easily understandable way?

4. What information did you find particularly useful?

5. Which aspect(s) of the Report would you like to have more information on?

6. How can we improve the Report?

7. Do you have any other comments and suggestions?

8. Please specify your background (general public, green group, professional / academic, other government department / organisation, etc.)

(optional)

Name: _____ Telephone: _____

Email: _____

Address: _____